# Honolulu High-Capacity Transit Corridor Project Alternatives Analysis

# Operations and Maintenance Cost Results Report

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Prepared for: City and County of Honolulu

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## List of Acronyms

AA Alternatives Analysis
AD Articulated Diesel
AH Articulated Hybrid

B Bus

DBOM Design, Build, Operate, Maintain

DTS City and County of Honolulu Department of Transportation Services

EIS Environmental Impact Statement

FG Fixed Guideway

FTA Federal Transit Administration

HHCTC Honolulu High Capacity Transit Corridor

HOV High Occupancy Vehicle

ML Managed Lane

ML R Managed Lane Reversible
ML TF Managed Lane Toll Facility

NEPA National Environmental Policy Act

NTD National Transit Database
O&M Operations and Maintenance

OMPO O'ahu Metropolitan Planning Organization

ORTP O'ahu Regional Transportation Plan

OTS O'ahu Transit Services
RTH Revenue Train Hours
RVH Revenue Vehicle Hours
RVM Revenue Vehicle Miles

SB Standard Bus

TSM Transportation System Management

UH University of Hawai'iUPT Unlinked Passenger Trip

1 Summary

The Operations and Maintenance Cost Results Report presents the final operations and maintenance (O&M) cost estimates for each of the four alternatives of the Honolulu High-Capacity Transit Corridor Project, which include 1) the No Build Alternative, 2) the Transportation Systems Management (TSM) Alternative, 3) the Managed Lane Alternative, and 4) the Fixed Guideway Alternative. Table 1-1 presents the O&M cost estimates for each of the alternatives. Cost estimates for Alternative #4 in this table reflect the situation where one organization provides all of the O&M functions for both modes, e.g., O&M responsibility for the fixed guideway system are absorbed by the existing bus agency.

Table 1-2 presents the O&M cost estimates for Alternative #4 in the situation with separate, fully-developed O&M organizations for each mode (bus and fixed guideway).

Table 1-1: Summary of Annual O&M Costs by Alternative and Mode

	A It arm ative		<b>O&amp;M Cost (2006 \$)</b>	
	Alternative	Bus	Fixed Guideway	Total
	2005	\$ 132,342,358	n/a	\$ 132,342,358
	#1: No Build	\$ 191,886,753	n/a	\$ 191,886,753
	#2: TSM	\$ 234,163,987	n/a	\$ 234,163,987
	#3: ML Two-Direction	\$ 250,875,595	n/a	\$ 250,875,595
	#3: ML Reversible	\$ 261,097,787	n/a	\$ 261,097,787
tives	#4: FG Option: Kalaeloa  – Salt Lake – North King  – Hotel	\$ 169,344,088	\$ 78,891,532	\$ 248,235,620
2030 Alternatives	#4: FG Option: Kamokila  – Airport – Dillingham – King with a Waikīkī Branch	\$ 168,686,305	\$ 79,906,656	\$ 248,592,961
ä	#4: FG Option: Kalaeloa – Airport – Dillingham – Halekauwila	\$ 172,965,694	\$ 83,122,586	\$ 256,088,280
	#4: FG 20-mile Alignment East Kapolei to Ala Moana Center	\$ 189,218,343	\$ 61,370,305	\$ 250,588,648

Table 1-2: Summary of Alternative #4 Annual O&M Costs, Separate O&M Organization for Each Mode

Alternative	O&M Cost (2006 \$)		
Alternative	Bus	Fixed Guideway	Total
#4: FG Option: Kalaeloa  – Salt Lake – North King  – Hotel	\$ 169,344,088	\$ 92,813,567	\$ 262,157,655
#4: FG Option: Kamokila  – Airport – Dillingham – King with a Waikīkī Branch	\$ 168,686,305	\$ 94,007,831	\$ 262,694,136
#4: FG Option: Kalaeloa  – Airport – Dillingham – Halekauwila	\$ 172,965,694	\$ 97,791,278	\$ 270,756,972
#4: FG 20-mile Alignment East Kapolei to Ala Moana Center	\$ 189,218,343	\$ 72,200,359	\$ 261,418,702

#### **Alternatives under Consideration**

Four alternatives will be evaluated in the Alternatives Analysis. They were developed through a screening process that considered alternatives identified through previous transit studies, a field review of the study corridor, an analysis of current housing and employment data for the corridor, a literature review of technology modes, work completed by the Oʻahu Metropolitan Planning Organization (OMPO) for its 2030 Oʻahu Regional Transportation Plan (ORTP), and public and agency comments received during a formal project scoping process held in accordance with requirements of the National Environmental Policy Act (NEPA) and the Hawaiʻi EIS Law (Chapter 343). The four alternatives are described in detail in the *Honolulu High-Capacity Transit Corridor Project Alternatives Analysis Definition of Alternatives Report (DTS, 2006a)*. The alternatives identified for evaluation in the AA report are:

- Alternative #1: No Build Alternative
- Alternative #2: Transportation System Management Alternative
- Alternative #3: Managed Lane Alternative
- Alternative #4: Fixed Guideway Alternative

#### Alternative 1: No Build Alternative

The No Build Alternative includes existing transit and highway facilities and committed transportation projects anticipated to be operational by 2030. Committed transportation projects are those programmed in the Oahu 2030 Regional Transportation Plan prepared by OMPO. The committed highway elements of the No Build Alternative will also be included in the build alternatives (discussed below).

The No Build Alternative's transit component would include an increase in fleet size to accommodate growth in population, while allowing service frequencies to remain the same as today. The specific number of buses, as well as required ancillary facilities have been projected and are included in Chapter 4.

#### Alternative 2: TSM Alternative

The Transportation System Management (TSM) Alternative would provide an enhanced bus system based on a hub-and-spoke route network, conversion of the present morning peak-hour-only zipper-lane to both a morning and afternoon peak-hour zipper-lane operation, and relatively low-cost capital improvements on selected roadway facilities to give priority to buses. The TSM Alternative will include the same committed highway projects as assumed for the No Build Alternative.

#### Alternative 3: Managed Lane Alternative

The Managed Lane Alternative would include construction of a two-lane, grade-separated facility between Waipahu and Downtown Honolulu for use by buses. Paratransit vehicles, vanpool vehicles, other High-occupancy vehicles (HOV) and toll-paying, single-occupant vehicles also would be allowed to use the facility provided that sufficient capacity would be available to maintain free-flow speeds for the vehicles using the facility. Variable pricing strategies would be implemented to ensure free-flow speeds for vehicles. Two Managed Lane options are considered: 1) two way operation with one lane in each direction for all day travel, and 2) reversible operation with two lanes in each direction, reversible by time of day.

Intermediate bus access points would be provided in the vicinity of Aloha Stadium and Middle Street. Bus service utilizing the managed lane facility would be restructured and enhanced, providing additional service between Kapolei and other points 'Ewa of the Primary Urban Center, and downtown Honolulu and the University of Hawai'i at Mānoa.

#### Alternative 4: Fixed Guideway Alternative

The Fixed Guideway Alternative would include the construction and operation of a fixed-guideway transit system between Kapolei and the University of Hawai'i at Mānoa. The system could use any fixed-guideway transit technology meeting performance requirements and could be automated or employ drivers. Light rail technology was used for the purpose of developing the Fixed Guideway O&M cost estimates included in this report.

Station and supporting facility locations are currently being identified and would include a vehicle maintenance facility and park-and-ride lots. Bus service would be reconfigured to bring riders on local buses to nearby fixed-guideway transit stations.

Although this alternative would be designed to be within existing street or highway rights-of-way as much as possible, property acquisition in various locations is expected. Future extensions of the system to Central O'ahu, East Honolulu or within the corridor are possible, but are not being addressed in detail at present.

Four alignment options were considered for the purposes of developing the Fixed Guideway O&M cost estimates provided in this report, described in Tables 2-1 through 2-4.

Table 2-1: Alternative #4: Fixed Guideway Alternative, Full-Corridor Alignment Kalaeloa – Salt Lake – North King – Hotel

Alignment Description	System Description
Section 1: Saratoga Avenue to North-South Road to Farrington Highway	- High capacity fixed guideway system integrated with bus, parking, bicycling, and walking
Section 2: Farrington Highway to Kamehameha Highway (through Waipahu, Pearl City and 'Aiea).	- Stations: 28
Section 3: Salt Lake Boulevard	- Total length: 26.5 miles
Section 4: North King Street	
Section 5: Hotel Street to Kawaiaha'o Street to Kona Street to Kapi'olani Boulevard to University Avenue to UH Mānoa	

Table 2-2: Alternative #4: Fixed Guideway Alternative, Full Corridor Alignment Kamokila – Airport – Dillingham – King with a Waikīkī Branch

Alignment Description	System Description
Section 1: Kamokila Boulevard to Farrington Highway	- High capacity fixed guideway system integrated with bus, parking, bicycling, and walking
Section 2: Farrington Highway to Kamehameha	
Highway (through Waipahu, Pearl City and 'Aiea).	- Stations: 29
	- Total length: 27.5 miles
Section 3: Kamehameha Highway to Nimitz Highway to Aolele Street	
Section 4: Dillingham Boulevard	
Section 5: South King Street Tunnel to Waimanu Street to Kona Street to Kapi'olani Boulevard to University Avenue to UH Mānoa, including a Waikiki Spur	

Table 2-3: Alternative #4: Fixed Guideway Alternative, Full Corridor Alignment Kalaeloa – Airport – Dillingham – Halekauwila

Alignment Description	System Description
Section 1: Kapolei Parkway to North-South Road	- High capacity fixed guideway system integrated with bus, parking, bicycling, and walking
Section 2: Farrington Highway to Kamehameha	
Highway (through Waipahu, Pearl City and	- Stations: 30
'Aiea).	
	- Total length: 27.6 miles
Section 3: Kamehameha Highway to Nimitz	
Highway (Makai of the Airport viaduct)	
Section 4: Dillingham Boulevard	
Section 5: Nimitz Highway to Halekauwila	
Street to Kona Street to Kapi'olani Boulevard to University Avenue to UH Mānoa	

Table 2-4: Alternative #4: Fixed Guideway Alternative, 20-mile Alignment East Kapolei to Ala Moana Center

Alignment Description	System Description
Section 1: Kapolei Parkway and North-South Road to Farrington Highway	- High capacity fixed guideway system integrated with bus, parking, bicycling, and walking
Section 2: Farrington Highway to Kamehameha Highway (through Waipahu, Pearl City and 'Aiea).	- Stations: 21
Section 3: Nimitz Highway to Aolele Street	- Total length: 20.7 miles
Section 4: Dillingham Boulevard	
Section 5: Nimitz Highway to Halekauwila Street to Kona Street to Ala Moana Center	

# **Report Purpose**

This O&M Cost Results Report presents the final operations and maintenance cost estimates for each of the four alternatives for the Honolulu High-Capacity Transit Corridor Project.

The O&M cost estimates are based on the methodology of developing unit costs specified in the Revised Final Operations and Maintenance Costing Methodology Report dated April 2, 2006, where detailed budgets are used to develop unit costs by assigning driving variables to each of the budget line items. In cases where detailed budgets were not available, data from the Federal Transit Administration's National Transit Database (NTD) were used to develop the unit costs.

Detailed bus budgetary and operating data were obtained from OTS for FY 04-05, and the associated unit costs were developed for that year. These costs were escalated one year by 4.32% to standardize bus costs in 2006 dollars.

Subsequent to the methodology report described above, and as a result of the unavailability of detailed budgetary data from peer rail properties, unit costs for the fixed guideway O&M cost model were developed through the use of data obtained from the NTD by assigning driving variables to line item object class expenses. Sacramento's Regional Transit District was considered to be representative of the Honolulu fixed guideway alternative, and FY 03-04 light rail cost data from that property was used in developing the fixed guideway unit costs. The costs were escalated two years by  $6.96\%^2$  to standardize fixed guideway costs in 2006 dollars. The costs were further adjusted upward by  $33.50\%^3$  to account for higher costs in Honolulu, as compared to the Sacramento area.

As the alternatives were advanced and data became available from the travel demand forecasting model, service level data were developed for use as inputs to the O&M cost model. Service level data for the bus mode were provided by others for the average weekday, then annualized by a factor as described in Chapter 4. Service level data for the fixed guideway mode were developed through the use of a spreadsheet program based on specific operating schedules and physical system characteristics, as also described in Chapter 4.

The annualized service level data were then used as inputs to the O&M cost model for each alternative and mode, the formulas of which are provided in Tables 3-1 and 3-2. This yielded bus and fixed guideway O&M cost estimates, as applicable, for each alternative.

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<sup>&</sup>lt;sup>1</sup> This is the actual inflation rate based on changes of the CPI from June 2005 to June 2006. Source: <a href="http://inflationdata.com/inflation\_rate/inflation\_rate/inflation\_actualcom/inflation\_rate/inflation\_actualcom/inflation\_rate/inflation\_actualcom/inflation\_rate/inflation\_actualcom/inflation\_actu

<sup>&</sup>lt;sup>2</sup> This is the actual inflation rate based on changes of the CPI from June 2004 to June 2006. Source: <a href="http://inflationdata.com/inflation/inflation-rate/inflationcalculator.asp">http://inflationdata.com/inflation/inflation-rate/inflationcalculator.asp</a>.

<sup>&</sup>lt;sup>3</sup> This is the cost of living difference between Sacramento, California and Honolulu, Hawaii. Source: ACCRA cost of living index for first quarter of 2006, ref. order #87ZEE21AGQ.

Table 3-1: Bus Transit O&M Cost Formula

```
x Number of Peak Vehicles, Standard Bus) +
O&M Cost in 2006 Dollars =
                              ($ 80.335
                              ($ 95,598
                                            x Number of Peak Vehicles, Artic. Diesel Bus) +
                              ($103,629
                                            x Number of Peak Vehicles, Artic. Hybrid Bus) +
                                      1.51 x Annual Revenue Vehicle Miles, Standard Bus) +
                              ($
                              ($
                                      2.09 x Annual Revenue Vehicle Miles, Artic Diesel Bus)
                              ($
                                      2.27 x Annual Rev. Vehicle Miles, Artic Hybrid Bus) +
                              ($
                                     51.62 x Annual Revenue Vehicle Hours) +
                              ($793.032
                                            x Number of Maintenance Facilities & Terminals) +
                              ($495,645
                                            x Number of Service Centers) +
                                       .055 x Annual Unlinked Passenger Trips)
                              ($
```

Table 3-2: Fixed Guideway Transit O&M Cost Formula

```
O&M Cost in 2006 Dollars = ($ 6.74 x Annual Revenue Vehicle Miles) + ($ 232.94 x Annual Revenue Train Hours) + ($156,412 x Directional Route Miles) + ($159,022 x Number of Stations)
```

The resulting O&M cost estimates for the fixed guideway alternatives represent the annual cost to operate and maintain the associated bus and fixed guideway systems utilizing stand-alone O&M organizations. That is, such estimates include the cost of not only operations and maintenance functions for each mode, but also the cost of fully-developed support functions/departments for each mode, such as legal, finance, marketing, public relations, HR/admin, etc. This contracting scenario could occur where a fixed guideway alternative is implemented under a DBOM procurement, for example, and the fixed guideway O&M contractor is a separate organization from the bus agency. The primary set of cost estimates and associated supporting tables in Chapters 4 and 5, and throughout this report, therefore reflect fixed guideway alternatives where each mode contains costs for fully-developed O&M organizations.

Such fixed guideway estimates, however, do not consider the possibility that O&M responsibility for the fixed guideway system could be assumed by the existing bus agency/operator. In this case, there would not be a need for duplicate, fully-developed organizations/departments for each mode. Instead, departments that perform similar functions within the bus organization required also by the fixed guideway system, could also support that operation. The overall cost of support functions for both modes will therefore be lower as a result of the efficiencies gained by utilizing the departments already in place at the bus agency for similar functions required by the fixed guideway operation. Data gathered from the NTD reflect the costs for support functions within representative fixed guideway O&M organizations to be generally around 30% of total O&M expenses. It is expected that a savings of 15% will be realized on the fixed guideway O&M cost estimates if both modes are consolidated under one organization. This savings rate considers the overall increase of costs for support functions resulting from this consolidation (i.e., the support of

two modes as opposed to one), but still represents a total savings of approximately 5% over both modes for each fixed guideway alternative. Therefore, the set of fixed guideway alternative O&M cost estimates provided in Table 5-13 represent O&M costs wherein one organization is responsible for the operations and maintenance of bus and fixed guideway, and where existing support departments for the bus operation absorb similar functions required by the fixed guideway operation.

The inputs to the O&M cost model, service level data and system characteristics data, are based on the outputs of the operations planning, are summarized in Table 4-1, and described further below.

#### Bus

Bus operating and system characteristics data were provided by others. Service level data were provided for the average weekday, and were annualized, where applicable, using a factor of 308. This factor was calculated using average known annual bus passenger trip data for three day types: weekdays, Saturdays/state holidays, and Sundays/federal holidays. Calculation of the factor was based on 246 weekdays, 52 Saturdays, 52 Sundays, 5 state holidays, and 10 federal holidays.

The average weekday bus operating plan tables for each of the alternatives are provided in Appendix A. Yellow highlighted areas apply to routes expected to operate with articulated hybrid buses.

## **Fixed Guideway**

Fixed guideway service level data were both provided by others and developed using a spreadsheet, where operating parameters such as vehicle capacity, route time, route distance, period span, headways, train sizes, fleet sizes, and demand were analyzed. These operating plans are provided in Appendix B. The fixed guideway operating schedules were defined according to three day types: weekdays, Saturdays/state holidays, and Sundays/federal holidays. Specific descriptions of the schedules for each of these days follow.

Weekdays (20 hour operating day)

Peak period: 5 hours of 3-minute headways with 2-car trains.

Off-peak period: 9 hours of 6-minute headways with 2-car trains

Base period: 3 hours of 6-minute headways with 1-car trains

Owl period: 3 hours of 10-minutes headways with 1-car trains

Saturdays / State Holidays (19 hour operating day)

Off-peak period: 11 hours of 6-minute headways with 2-car trains

Base period: 2 hours of 6-minute headways with 1-car trains

Owl period: 6 hours of 10-minute headways with 1-car trains

Sundays / Federal Holidays (18 hour operating day)

Off-peak period: 12 hours of 6-minute headways with 1-car trains
Owl period: 6 hours of 10-minute headways with 1-car trains

The analysis of operating schedules and parameters resulted in daily service level data for revenue vehicle miles and revenue train hours, which were annualized according to the specific day type rather than using one factor as was performed for the bus data. The factors used for this service level data were 246 for weekdays, 57 for Saturdays and state holidays (52 + 5), and 62 for Sundays and federal holidays (52 + 10). Where other fixed guideway service level data were provided on an average weekday basis, a factor of 308 was used to annualize such data. These annualized service level data were then used as inputs to the fixed guideway cost model, along with other physical system characteristic data, to generate fixed guideway cost estimates.

Peak operating fleet sizes were also determined from the fixed guideway operating plans for each option. The total fleet size is based on limiting the average annual vehicle mileage to 80,000, and is calculated by dividing the annual revenue vehicle miles by this number.

Table 4-1: Operating Characteristics - Bus and Fixed Guideway Components

Г		2030 ALTERNATIVES							
	T	Alt #1	Alt #2	Alterna	tive #3		Alterna	tive #4	
	2005	No Build	TSM	ML Two-Direction	ML Reversible	FG Option: Kalaeloa – Salt Lake – North King – Hotel	FG Option: Kamokila – Airport – Dillingham – King with a Waikīkī Branch	FG Option: Kalaeloa – Airport – Dillingham – Halekauwila	FG 20-mile Alignment East Kapolei to Ala Moana Center
Standard Bus									
Annual RVM	14,341,928	9,209,262	13,231,988	13,637,131	13,637,100	12,833,528	12,722,279	12,846,742	16,006,390
Peak vehicles	345	232	319	340	340	304	300	309	352
Artic Bus - Diesel									
Annual RVM	2,784,351	4,151,748	6,565,451	8,288,311	9,035,488	2,695,277	2,496,617	2,496,617	3,273,209
Peak vehicles	57	76	116	161	225	38	36	35	73
Artic Bus - Hybrid									
Annual RVM	302,856	10,356,130	9,316,846	9,316,846	9,316,846	5,947,388	6,096,090	6,312,768	4,676,087
Peak vehicles	7	203	203	203	203	99	99	104	72
Other Bus	1								
Annual RVH	1,251,096	1,744,050	2,165,948	2,289,179	2,338,736	1,642,472	1,647,584	1,693,415	1,857,610
Total annual RVM	17,429,135	23,717,140	29,114,285	31,242,288	31,989,434	21,476,193	21,314,986	21,656,127	23,955,686
Total peak vehicles	409	511	638	704	768	441	435	448	497
Mntnce. facilities	2	3	3	3	3	2	2	2	2
Service centers	0	0	1	1	1	1	1	1	1
Terminals	0	1	1	1	1	1	1	1	1
Total facilities	2	4	5	5	5	4	4	4	4
Annual UPT	75,023,256	102,288,648	110,133,100	112,725,228	112,388,892	102,537,204	99,596,728	101,196,172	110,962,852
Fixed Guideway									
Annual RVM	n/a	n/a	n/a	n/a	n/a	7,034,215	7,224,004	7,427,336	5,509,743
Annual RTH	n/a	n/a	n/a	n/a	n/a	140,118	137,658	147,237	108,396
Stations	n/a	n/a	n/a	n/a	n/a	28	29	30	21
Route miles	n/a	n/a	n/a	n/a	n/a	52.98	55.08	55.22	41.40
Peak vehicles	n/a	n/a	n/a	n/a	n/a	72	68	74	54
Total vehicles	n/a	n/a	n/a	n/a	n/a	90	90	93	70

The operations and maintenance cost estimates presented in this chapter represent the final estimate of O&M costs for the four alternatives. The results are based on the methodology presented in Chapter 2, and the engineering and travel demand forecasting results. The O&M costs are expressed in 2006 dollars and the alternatives are assumed to be fully developed in the year 2030. The inputs for each alternative were applied to the cost model and the results are provided in Tables 5-1 through 5-9. A summary of the annual O&M costs by mode for each alternative is provided in Table 5-10. Summary tables of O&M costs by vehicle type and service level are provided in Tables 5-11 and 5-12. An additional summary table of the annual fixed guideway O&M costs is provided in Table 5-13, which reflects the cost savings realized when one O&M organization manages both modes, as discussed in Chapter 3.

Table 5-1: 2005, Annual O&M Cost

Driving Variable	2005 Service Level	Unit Cost	Annual Cost
Bus			
Annual RVM, SB	14,341,928	\$ 1.510	\$ 21,602,981
Annual RVM, AD	2,784,351	\$ 2.090	\$ 5,829,682
Annual RVM, AH	302,856	\$ 2.270	\$ 687,364
Peak Vehicles, SB	345	\$ 80,335.000	\$ 27,715,500
Peak Vehicles, AD	57	\$ 95,598.000	\$ 5,449,108
Peak Vehicles, AH	7	\$ 103,629.000	\$ 725,401
Annual RVH	1,251,096	\$ 51.620	\$ 64,583,429
Maintenance facilities	2	\$ 793,032.000	\$ 1,586,064
Service Centers	0	\$ 495,645.000	\$ 0
Terminals	0	\$ 793,032.000	\$ 0
Annual UPT	75,023,256	\$ .055	\$ 4,162,828
	\$ 132,342,358		

Table 5-2: Alternative #1: No Build Alternative, Annual O&M Cost

Driving Variable	2030 Service Level	Unit Cost	<b>Annual Cost</b>	
Bus				
Annual RVM, SB	9,209,262	\$ 1.510	\$ 13,871,741	
Annual RVM, AD	4,151,748	\$ 2.090	\$ 8,692,644	
Annual RVM, AH	10,356,130	\$ 2.270	\$ 23,504,323	
Peak Vehicles, SB	232	\$ 80,335.000	\$ 18,637,669	
Peak Vehicles, AD	76	\$ 95,598.000	\$ 7,265,478	
Peak Vehicles, AH	203	\$ 103,629.000	\$ 21,036,617	
Annual RVH	1,744,050	\$ 51.620	\$ 90,030,444	
Maintenance facilities	3	\$ 793,032.000	\$ 2,379,096	
Service Centers	0	\$ 495,645.000	\$ 0	
Terminals	1	\$ 793,032.000	\$ 793,032	
Annual UPT	102,288,648	\$ .055	\$ 5,675,708	
	\$ 191,886,753			

Table 5-3: Alternative #2: TSM Alternative, Annual O&M Cost

Driving Variable	2030 Service Level	Unit Cost	Annual Cost
Bus			
Annual RVM, SB	13,231,988	\$ 1.510	\$ 19,931,099
Annual RVM, AD	6,565,451	\$ 2.090	\$ 13,746,291
Annual RVM, AH	9,316,846	\$ 2.270	\$ 21,145,558
Peak Vehicles, SB	319	\$ 80,335.000	\$ 25,626,795
Peak Vehicles, AD	116	\$ 95,598.000	\$ 11,089,413
Peak Vehicles, AH	203	\$ 103,629.000	\$ 21,036,617
Annual RVH	2,165,948	\$ 51.620	\$ 111,809,465
Maintenance facilities	3	\$ 793,032.000	\$ 2,379,096
Service Centers	1	\$ 495,645.000	\$ 495,645
Terminals	1	\$ 793,032.000	\$ 793,032
Annual UPT	110,133,100	\$ .055	\$ 6,110,974
	\$ 234,163,987		

Table 5-4: Alternative #3: Managed Lane Alternative – Two-Direction Annual O&M Cost

Driving Variable	2030 Service Level	<b>Unit Cost</b>	Annual Cost
Bus			
Annual RVM, SB	13,637,131	\$ 1.510	\$ 20,541,359
Annual RVM, AD	8,288,311	\$ 2.090	\$ 17,353,496
Annual RVM, AH	9,316,846	\$ 2.270	\$ 21,145,558
Peak Vehicles, SB	340	\$ 80,335.000	\$ 27,313,826
Peak Vehicles, AD	161	\$ 95,598.000	\$ 15,391,341
Peak Vehicles, AH	203	\$ 103,629.000	\$ 21,036,617
Annual RVH	2,289,179	\$ 51.620	\$ 118,170,821
Maintenance facilities	3	\$ 793,032.000	\$ 2,379,096
Service Centers	1	\$ 495,645.000	\$ 495,645
Terminals	1	\$ 793,032.000	\$ 793,032
Annual UPT	112,725,228	\$ .055	\$ 6,254,804
	Total annua	l O&M cost (2006 \$)	\$ 250,875,595

Table 5-5: Alternative #3: Managed Lane Alternative – Reversible Annual O&M Cost

Driving Variable	2030 Service Level	Unit Cost	Annual Cost
Bus			
Annual RVM, SB	13,637,100	\$ 1.510	\$ 20,541,312
Annual RVM, AD	9,035,488	\$ 2.090	\$ 18,917,884
Annual RVM, AH	9,316,846	\$ 2.270	\$ 21,145,558
Peak Vehicles, SB	340	\$ 80,335.000	\$ 27,313,826
Peak Vehicles, AD	225	\$ 95,598.000	\$ 21,509,638
Peak Vehicles, AH	203	\$ 103,629.000	\$ 21,036,617
Annual RVH	2,338,736	\$ 51.620	\$ 120,729,037
Maintenance facilities	3	\$ 793,032.000	\$ 2,379,096
Service Centers	1	\$ 495,645.000	\$ 495,645
Terminals	1	\$ 793,032.000	\$ 793,032
Annual UPT	112,388,892	\$ .055	\$ 6,236,142
	Total annual	O&M cost (2006 \$)	\$ 261,097,787

Table 5-6: Alternative #4: Fixed Guideway Alternative, Full-Corridor Alignment Kalaeloa – Salt Lake – North King – Hotel Annual O&M Cost

Driving Variable	2030 Service Level	Unit Cost	Annual Cost
Bus			
Annual RVM, SB	12,833,528	\$ 1.510	\$ 19,330,907
Annual RVM, AD	2,695,277	\$ 2.090	\$ 5,643,186
Annual RVM, AH	5,947,388	\$ 2.270	\$ 13,498,219
Peak Vehicles, SB	304	\$ 80,335.000	\$ 24,421,774
Peak Vehicles, AD	38	\$ 95,598.000	\$ 3,632,739
Peak Vehicles, AH	99	\$ 103,629.000	\$ 10,259,237
Annual RVH	1,642,472	\$ 51.620	\$ 84,786,817
Maintenance facilities	2	\$ 793,032.000	\$ 1,586,064
Service Centers	1	\$ 495,645.000	\$ 495,645
Terminals	1	\$ 793,032.000	\$ 793,032
Annual UPT	102,537,204	\$ .055	\$ 5,689,499
	Total annual bu	us O&M cost (2006 \$)	\$ 169,344,088
Fixed Guideway			
Annual RVM	7,034,215	\$ 6.740	\$ 47,434,454
Annual RTH	140,118	\$ 232.940	\$ 32,639,786
Stations	28	\$ 159,022.000	\$ 4,452,627
Route miles	52.98	\$ 156,412.000	\$ 8,286,699
To	otal annual fixed guidewa	y O&M cost (2006 \$)	\$ 92,813,567
	Grand total annua	l O&M cost (2006 \$)	\$ 262,157,655
Grand total annual O&M co	st assuming common O	&M organization for both modes (2006 \$)	\$ 248,235,620

Table 5-7: Alternative #4: Fixed Guideway Alternative, Full Corridor Alignment Kamokila – Airport – Dillingham – King with a Waikīkī Branch Annual O&M Cost

Driving Variable	2030 Service Level	Unit Cost	Annual Cost
Bus			
Annual RVM, SB	12,722,279	\$ 1.510	\$ 19,163,334
Annual RVM, AD	2,496,617	\$ 2.090	\$ 5,227,246
Annual RVM, AH	6,096,090	\$ 2.270	\$ 13,835,715
Peak Vehicles, SB	300	\$ 80,335.000	\$ 24,100,435
Peak Vehicles, AD	36	\$ 95,598.000	\$ 3,441,542
Peak Vehicles, AH	99	\$ 103,629.000	\$ 10,259,237
Annual RVH	1,647,584	\$ 51.620	\$ 85,050,747
Maintenance facilities	2	\$ 793,032.000	\$ 1,586,064
Service Centers	1	\$ 495,645.000	\$ 495,645
Terminals	1	\$ 793,032.000	\$ 793,032
Annual UPT	99,596,728	\$ .055	\$ 5,526,341
	Total annual bu	us O&M cost (2006 \$)	\$ 168,686,305
Fixed Guideway			
Annual RVM	7,224,004	\$ 6.740	\$ 48,714,276
Annual RTH	137,658	\$ 232.940	\$ 32,066,741
Stations	29	\$ 159,022.000	\$ 4,611,650
Route miles	55.08	\$ 156,412.000	\$ 8,615,164
То	tal annual fixed guidewa	y O&M cost (2006 \$)	\$ 94,007,831
	Grand total annua	l O&M cost (2006 \$)	\$ 262,694,136
Grand total annual O&M cos	t assuming common O	&M organization for both modes (2006 \$)	\$ 248,592,961

Table 5-8: Alternative #4: Fixed Guideway Alternative, Full Corridor Alignment Kalaeloa – Airport – Dillingham – Halekauwila Annual O&M Cost

Driving Variable	2030 Service Level	Unit Cost	Annual Cost
Bus			
Annual RVM, SB	12,846,742	\$ 1.510	\$ 19,350,810
Annual RVM, AD	2,496,617	\$ 2.090	\$ 5,227,246
Annual RVM, AH	6,312,768	\$ 2.270	\$ 14,327,488
Peak Vehicles, SB	309	\$ 80,335.000	\$ 24,823,448
Peak Vehicles, AD	35	\$ 95,598.000	\$ 3,345,944
Peak Vehicles, AH	104	\$ 103,629.000	\$ 10,777,380
Annual RVH	1,693,415	\$ 51.620	\$ 87,416,580
Maintenance facilities	2	\$ 793,032.000	\$ 1,586,064
Service Centers	1	\$ 495,645.000	\$ 495,645
Terminals	1	\$ 793,032.000	\$ 793,032
Annual UPT	101,196,172	\$ .055	\$ 5,615,089
	Total annual bu	as O&M cost (2006 \$)	\$ 172,965,694
Fixed Guideway			
Annual RVM	7,427,336	\$ 6.740	\$ 50,085,423
Annual RTH	147,237	\$ 232.940	\$ 34,298,121
Stations	30	\$ 159,022.000	\$ 4,770,672
Route miles	55.22	\$ 156,412.000	\$ 8,637,062
Tot	al annual fixed guidewa	y O&M cost (2006 \$)	\$ 97,791,278
	Grand total annua	l O&M cost (2006 \$)	\$ 270,756,972
Grand total annual O&M cost	assuming common O	&M organization for both modes (2006 \$)	\$ 256,088,280

Table 5-9: Alternative #4: Fixed Guideway Alternative, 20-mile Alignment East Kapolei to Ala Moana Center Annual O&M Cost

Driving Variable	2030 Service Level	<b>Unit Cost</b>	Annual Cost
Bus			
Annual RVM, SB	16,006,390	\$ 1.510	\$ 24,110,130
Annual RVM, AD	3,273,209	\$ 2.090	\$ 6,853,220
Annual RVM, AH	4,676,087	\$ 2.270	\$ 10,612,869
Peak Vehicles, SB	352	\$ 80,335.000	\$ 28,277,843
Peak Vehicles, AD	73	\$ 95,598.000	\$ 6,978,682
Peak Vehicles, AH	72	\$ 103,629.000	\$ 7,461,263
Annual RVH	1,857,610	\$ 51.620	\$ 95,892,580
Maintenance facilities	2	\$ 793,032.000	\$ 1,586,064
Service Centers	1	\$ 495,645.000	\$ 495,645
Terminals	1	\$ 793,032.000	\$ 793,032
Annual UPT	110,962,852	\$ .055	\$ 6,157,015
	Total annual bu	s O&M cost (2006 \$)	\$ 189,218,343
Fixed Guideway			
Annual RVM	5,509,743	\$ 6.740	\$ 37,135,668
Annual RTH	108,396	\$ 232.940	\$ 25,249,764
Stations	21	\$ 159,022.000	\$ 3,339,470
Route miles	41.40	\$ 156,412.000	\$ 6,475,457
То	tal annual fixed guidewa	y O&M cost (2006 \$)	\$ 72,200,359
	Grand total annua	l O&M cost (2006 \$)	\$ 261,418,702
Grand total annual O&M cos	t assuming common O	&M organization for both modes (2006 \$)	\$ 250,588,648

Table 5-10: Summary of Annual O&M Costs By Alternative and Mode

	Alternative  2005  #1: No Build  #2: TSM  #3: ML Two-Direction  #3: ML Reversible  #4: FG Option: Kalaeloa  - Salt Lake – North King  - Hotel  #4: FG Option: Kamokila  - Airport – Dillingham – King with a Waikīkī Branch  #4: FG Option: Kalaeloa  - Airport – Dillingham – Halekauwila	<b>O&amp;M Cost (2006 \$)</b>							
		Bus	Fixed Guideway	Total					
	2005	\$ 132,342,358	n/a	\$ 132,342,358					
	#1: No Build	\$ 191,886,753	n/a	\$ 191,886,753					
	#2: TSM	\$ 234,163,987	n/a	\$ 234,163,987					
	#3: ML Two-Direction	\$ 250,875,595	n/a	\$ 250,875,595					
	#3: ML Reversible	\$ 261,097,787	n/a	\$ 261,097,787					
natives	– Salt Lake – North King	\$ 169,344,088	\$ 92,813,567	\$ 262,157,655					
2030 Alternatives	– Airport – Dillingham – King with a Waikīkī	\$ 168,686,305	\$ 94,007,831	\$ 262,694,136					
	– Airport – Dillingham –	\$ 172,965,694	\$ 97,791,278	\$ 270,756,972					
	#4: FG 20-mile Alignment East Kapolei to Ala Moana Center	\$ 189,218,343	\$ 72,200,359	\$ 261,418,702					

Table 5-11: Summary of Annual O&M Costs by Vehicle Type and Mode

						2030 ALTEI	RNATIVES*			
			Alt #1	Alt #2	Alterna	tive #3		Alterna	ntive #4	
	Unit Cost**	2005*	No Build	TSM	ML Two-Direction	ML Reversible	FG Option: Kalaeloa – Salt Lake – North King – Hotel	FG Option: Kamokila – Airport – Dillingham – King with a Waikīkī Branch	FG Option: Kalaeloa – Airport – Dillingham – Halekauwila	FG 20-mile Alignment East Kapolei to Ala Moana Center
Standard Bus		\$ 49.3	\$ 32.5	\$ 45.5	\$ 47.8	\$ 47.8	\$ 43.7	\$ 43.3	\$ 44.2	\$ 52.4
Annual RVM	\$ 1.510	14,341,928	9,209,262	13,231,988	13,637,131	13,637,100	12,833,528	12,722,279	12,846,742	16,006,390
Peak vehicles	\$ 80,335.000	345	232	319	340	340	304	300	309	352
Artic Bus - Diesel		\$ 11.2	\$16.0	\$ 24.8	\$ 32.8	\$ 40.4	\$ 9.2	\$ 8.6	\$ 8.5	\$ 13.8
Annual RVM	\$ 2.090	2,784,351	4,151,748	6,565,451	8,288,311	9,035,488	2,695,277	2,496,617	2,496,617	3,273,209
Peak vehicles	\$ 95,598.000	57	76	116	161	225	38	36	35	72
Artic Bus - Hybrid		\$ 1.4	\$ 44.5	\$ 42.1	\$ 42.1	\$ 42.1	\$ 23.8	\$ 24.1	\$ 25.1	\$ 18.1
Annual RVM	\$ 2.270	302,856	10,356,130	9,316,846	9,316,846	9,316,846	5,947,388	6,096,090	6,312,768	4,676,087
Peak vehicles	\$ 103,629.000	7	203	203	203	203	99	99	104	72
Other Bus		\$ 70.4	\$ 98.9	\$ 121.6	\$ 135.8	\$ 138.5	\$ 93.4	\$ 93.5	\$ 95.9	\$ 104.9
Annual RVH	\$ 51.620	1,251,096	1,744,050	2,165,948	2,289,179	2,338,736	1,642,472	1,647,584	1,693,415	1,857,610
Mntnce. facilities	\$ 793,032.000	2	3	3	3	2,550,750	2	2	2	2
Service centers	\$ 495,645.000	0	0	1	1	1	1	1	1	1
Terminals	\$ 793,032.000	0	1	1	1	1	1	1	1	1
Annual UPT	\$ .055	75,023,256	102,288,648	110,133,100	112,725,228	112,388,892	102,537,204	99,596,728	101,196,172	110,962,852
Fixed Guideway		\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 92.8	\$ 94.0	\$ 97.8	\$ 68.6
Annual RVM	\$ 6.740	n/a	n/a	n/a	n/a	n/a	7,034,215	7,224,004	7,427,336	5,509,743
Annual RTH	\$ 232.940	n/a	n/a	n/a	n/a	n/a	140,118	137,658	147,237	108,396
Stations	\$ 159,022.000	n/a	n/a	n/a	n/a	n/a	28	29	30	21
Route miles	\$ 156,412.000	n/a	n/a	n/a	n/a	n/a	52.98	55.08	55.22	41.40
Total Annual O&M Cos	st*	\$ 132.3	\$ 191.9	\$ 234.2	\$ 250.9	\$ 261.1	\$ 262.2	\$ 262.7	\$ 270.8	\$ 261.4
Incremental Annual O&	&M Cost* (over No-Bui	ld)		\$ 42.3	\$ 59.0	\$ 69.2	\$ 70.3	\$ 70.8	\$ 78.9	\$ 69.5

<sup>\* -</sup> Cost estimates are expressed in millions of Year 2006 dollars. \*\* - Unit costs are expressed in Year 2006 dollars.

Table 5-12: Summary of Annual O&M Costs by Service Level

		2030 ALTERNATIVES									
	2005*	Alt #1	Alt #2	Alterna	tive #3		Alterna	tive #4			
		No Build	TSM	ML Two-Direction	ML Reversible	FG Option: Kalaeloa – Salt Lake – North King – Hotel	FG Option: Kamokila – Airport – Dillingham – King with a Waikīkī Branch	FG Option: Kalaeloa – Airport – Dillingham – Halekauwila	FG 20-mile Alignment East Kapolei to Ala Moana Center		
Annual Svc Level											
Bus											
Annual RVM	17,429,135	23,717,140	29,114,285	31,242,288	31,989,434	21,476,193	21,314,986	21,656,127	23,955,686		
Annual RVH	1,251,096	1,744,050	2,165,948	2,289,179	2,338,736	1,642,472	1,647,584	1,693,415	1,857,610		
Peak vehicles	409	511	638	704	768	441	435	448	497		
Facilities	2	4	5	5	5	4	4	4	4		
UPT	75,023,256	102,288,648	110,133,100	112,725,228	112,388,892	102,537,204	99,596,728	101,196,172	110,962,852		
Fixed Guideway		10									
Annual RVM	n/a	n/a	n/a	n/a	n/a	7,034,215	7,224,004	7,427,336	5,509,743		
Annual RTH	n/a	n/a	n/a	n/a	n/a	140,118	137,658	147,237	108,396		
Stations	n/a	n/a	n/a	n/a	n/a	28	29	30	21		
Route miles	n/a	n/a	n/a	n/a	n/a	52.98	55.08	55.22	41.40		
Annual Costs											
Bus											
Annual RVM	\$ 28.1	\$ 46.1	\$ 54.7	\$ 59.0	\$ 60.5	\$ 38.4	\$ 38.2	\$ 38.9	\$ 41.6		
Annual RVH	\$ 64.6	\$ 90.0	\$ 111.8	\$ 118.2	\$ 120.7	\$ 84.8	\$ 85.1	\$ 87.4	\$ 95.9		
Peak vehicles	\$ 33.8	\$ 46.9	\$ 57.7	\$ 63.7	\$ 69.8	\$ 38.3	\$ 37.8	\$ 38.9	\$ 42.7		
Facilities	\$ 1.6	\$ 3.2	\$ 3.7	\$ 3.7	\$ 3.7	\$ 2.9	\$ 2.9	\$ 2.9	\$ 2.9		
UPT	\$ 4.2	\$ 5.7	\$ 6.1	\$ 6.3	\$ 6.2	\$ 5.7	\$ 5.5	\$ 5.6	\$ 6.1		
Fixed Guideway											
Annual RVM	n/a	n/a	n/a	n/a	n/a	\$ 47.4	\$ 48.7	\$ 50.1	\$ 37.1		
Annual RTH	n/a	n/a	n/a	n/a	n/a	\$ 32.6	\$ 32.1	\$ 34.3	\$ 25.3		
Stations	n/a	n/a	n/a	n/a	n/a	\$ 4.5	\$ 4.6	\$ 4.8	\$ 3.3		
Route miles	n/a	n/a	n/a	n/a	n/a	\$ 8.3	\$ 8.6	\$ 8.6	\$ 6.5		
Total	\$ 132.3	\$ 191.9	\$ 234.2	\$ 250.9	\$ 261.1	\$ 262.2	\$ 262.7	\$ 270.8	\$ 261.4		

<sup>\* -</sup> Cost estimates are expressed in millions of Year 2006 dollars.

Table 5-13: Summary of Alternative #4 Annual O&M Costs, Common O&M Organization for Both Modes

Alternative	2006 O&M Cost (2006 \$)							
	Bus	Fixed Guideway	Total					
#4: FG Option: Kalaeloa  – Salt Lake – North King  – Hotel	\$ 169,344,088	\$ 78,891,532	\$ 248,235,620					
#4: FG Option: Kamokila  – Airport – Dillingham – King with a Waikīkī Branch	\$ 168,686,305	\$ 79,906,656	\$ 248,592,961					
#4: FG Option: Kalaeloa – Airport – Dillingham – Halekauwila	\$ 172,965,694	\$ 83,122,586	\$ 256,088,280					
#4: FG 20-mile Alignment East Kapolei to Ala Moana Center	\$ 189,218,343	\$ 61,370,305	\$ 250,588,648					

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# **Bus Operating Plan – 2005**

ROU	JTE			Weekd	WEEKD/ ay Totals	AY DPER		Max Ve	hicles R	equired			EPLDYE X SERV	
Number	Function	Weekday	Running Time	Layover	Total Time	Total Time	Total Weekday							
Number	Function	Trips	(Minutes)	(minutes)	(minutes)	Hours	Mileage	AM Peak	Base	PM Peak	60	40	35	30
Α	LS	143	10,590	1,072	11,662	194.4	2,528.4	18	12	18	18			
В	LS	133	5,349	1,456	6,805	113.4	1,037.4	7	7	8	6	2		
C	LS	79	6,689	730	7,419 17.612	123.7	2,791.8	8	7	9	9	25		
2	L	239 158	16,231 9,776	1,381 889	17,612	293.5 177.8	3,343.5 1,449.7	23 14	21 11	25 13	8	25 6		
3	L	143	9,386	1,167	10,553	175.9	1,744.2	18	11	14	۱Ů	18		
4	L	122	7,651	937	8,588	143.1	1,244.0	14	8	15		14		
5	CC	55	1,207	174	1,381	23.0	281.3	2	1	2		2		
6	cc	95	5,384	437	5,821	97.0	838.2	7	7	7		7		_
- 7 - 8	CC L	80 68	2,448 3,849	305 552	2,753 4,401	45.9 73.4	480.3 499.5	included w		19	included	with Ro	uite 19	
9	i.	95	6,474	960	7,434	123.9	1.316.0	13	5	12	moduce	13	ute 15	
10	CC	40	1,297	106	1,403	23.4	247.9	2	1	3				3
11	L	33	1,826	172	1,998	33.3	515.9	4	2	4		4		
13	L	155	8,629	769 106	9,398	156.6 43.8	1,207.0	10 4	10 2	11 4		11	2	2
14 15	CC	53 56	2,519 1,268	78	2,625 1,346	22.4	644.2 508.7	2	1	2			1	1
16	CC	10	250	50	300	5.0	74.2	1	Ö	1			1	
17	CC	65	907	242	1,149	19.2	120.5	1	1	2		2		
18	CC	30	681	189	870	14.5	127.5	1	1	1		1		
19	L	79	5,881	976	6,857	114.3	1,349.8	21	21	23		23		
20	L	38 14	3,417	774	4,191	69.9	645.4	included w			included	with Ro		
21 22	CC L	21	291 1,120	35 150	326 1,270	5.4 21.2	68.9 326.3	1 2	2	1 4		4	1	
31	CC	42	1,333	51	1,384	23.1	336.6	2	1	2		2		
32	L	45	2,314	243	2,557	42.6	692.3	4	2	4		2		
40	Ĺ	98	11,189	835	12,024	200.4	3,467.1	12	12	14	1	13		
41	L	75	1,696	373	2,069	34.5	744.5	3	3	3		3		
42	L	83	9,110	780	9,890	164.8	2,095.2	10	11	13	13			
43	L	42	2,880	295	3,175	52.9	917.7	5	5	5	<u> </u>	5	-	
52 53	L	62 72	7,443 4,063	888 308	8,331 4,371	138.9 72.9	2,904.3 1,102.6	33 7	27 4	32 6		33 7		
54	L	91	4,063	305	4,371	82.1	1,303.6	6	4	9		9		$\vdash$
55	Ē	59	6,658	879	7,537	125.6	2,531.3	included w						
56	L	60	4,626	454	5,080	84.7	1,440.0	7	5	10		10		
57	L	78	4,612	774	5,386	89.8	1,571.5	16	12	16		16		
57A	L	28	1,372	200	1,572	26.2	440.6	included w						
58	L	45	2,905	290	3,195	53.3	898.3	included w						_
62 65	L	74 46	6,340	642 323	6,982 3,137	116.4 52.3	1,670.6	included w						
70	CC	25	2,814 840	323	873	14.6	865.3 318.7	included w	Itn Route	1				1
71	CC	14	258	24	282	4.7	77.8	1	<u> </u>	1				1
72	CC	25	677	128	805	13.4	169.5	1	1	1				1
73	CC	47	459	229	688	11.5	197.8	1	1	1				1
74	CC	16	347	53	400	6.7	77.5	1	0	1				1
76	CC	40	600	200	800	13.3	168.2	1	1	1				1
77	CC	17	635	127	762	12.7	226.7	1	1	1 1		1		
401 402	CC	18 18	456 410	84 130	540 540	9.0 9.0	161.5 127.8	included w included w						
403	CC	36	949	105	1,054	17.6	315.6	2	2	2		2		
411	cc	74	1,032	90	1,122	18.7	268.6	included w						
412	CC	58	522	348	870	14.5	158.9	1	1	1				1
413	CC	24	288	84	372	6.2	111.5	1	0	1		1		
414	CA	29	349	502	851	14.2	106.6	11	1	1	Handi-V		L	
415	CC	2	76	0	76	1.3	15.2	0	0	0	included	with Ro	ute 413	_
421 431	CC	43 32	688 830	602 110	1,290 940	21.5 15.7	201.7 241.8	1	1 1	1		1		2
432	CC	147	1,837	370	2,207	36.8	391.0	2	2	2		2		
433	cc	68	1,625	157	1,782	29.7	331.7	1	1	1		1		
434	CC	70	897	136	1,033	17.2	259.6	1	1	1		1		
503	CA	34	722	177	899	15.0	148.4	1	1	1	Handi-V	an an		
XPRESS											$\vdash$			$\vdash$
80	X	11	673	0	673	11.2	204.4	7	0	2	<u> </u>	7		-
80A 80B	X	9	639 79	0	639 79	10.7	166.1 22.3	3 0	0	1	<b>-</b>	3	1	
81	X	22	1,288	0	1,288	21.5	452.4	6	0	6	3	3	· ·	
82	Х	7	354	0	354	5.9	109.8	included w	al Davida	00				
83	Х	14	1,117	0	1,117	18.6	402.2	4	0	6		6		
83A	X	4	253	0	253	4.2	106.2	1	0	2	L	2		_
84	X	8	583	0	583	9.7	219.6 206.6	4	0	4	1	4	-	
84A 85	X	8	583 613	0	583 613	9.7 10.2	206.6 181.3	6	0	4 5	1	3 6	1	
85A	X	6	309	0	309	5.2	95.0	3	0	2		3		
86	X	2	128	0	128	2.1	51.8	1	0	1		1		
86A	Х	2	136	0	136	2.3	56.7	1	0	1		1		
88	Х	3	143	0	143	2.4	49.1	2	0	3		3		
88A	X	10	2,004	0	2,004	33.4	812.4	2	0	2		2		
89	X	3	216 153	0	216	3.6	71.8	1 2	0	2	-	2		_
90 91	X	17	1,163	0	153 1,163	2.6 19.4	45.6 412.3	5	0	5	5			$\vdash$
92	X	6	462	0	462	7.7	153.6	2	0	3	ا ا	3		
93	X	29	2,266	0	2,266	37.8	969.5	9	0	9		9		
93A	X	2	152	0	152	2.5	74.2	1	0	1		1		
95	Х	2	169	0	169	2.8	62.0	1	0	1		1		
96	Х	4	182	0	182	3.0	70.3	1	0	2		2		
97	Х	8	380	0	380	6.3	153.6	1	0	3		3		_
98	X	6	322	0	322	5.4	137.0	2	0	3		3		<u> </u>
101 102	X	10 6	550 390	0	550 390	9.2	221.4	2	0	5	<b>-</b>	5	-	
102	X	4	206	0	206	6.5 3.4	150.5 66.7	0	0	2	<del>                                     </del>	2		
201	X	9	891	0	891	14.9	248.0	6	0	3	<b> </b>	6		
	x	6	470	0	470	7.8	128.0	3	0	2		3		
202			232	0	232	3.9	40.4	ō	0	2	l .	2		
202	Х	4	232	0	202	0.0	70.7	0 1				-		

# Bus Operating Plan – Alternative #1, No-Build

ROUTE					WEEKDAY		NS				W	EEKDAY	OPERATION	ONS	
			Running	and the second second		lay Totals	Total		4:00 AM	5:30 AM	9:00 AM	3:00 PM	6:00 PM	11:00 PM	
Number	Function	Weekday Trips	Time (Minutes)	Layover (minutes)	Total Time (minutes)	Total Time Hours	Weekday Mileage	Span of Service	to 5:29 AM	to 8:59 AM	to 2:59 PM	to 5:59 PM	to 10:59 PM	to 3:59 AM	Vehicle Size
B B	LS	143 129	10,718 5,847	1,072 493	11,790 6,340	196.5 105.7	2,998.5 1,026.8	4:15 AM to 10:37 PM 4:55 AM to 11:02 PM	12	18 7	13	17	11 6	0	60
C D	LS	150 74	13,389 5,180	1,504 370	14,893 5,550	248.2 92.5	1,873.7	3:07 AM to 10:53 PM 5:00 AM to 10:00 PM	10 8	16	15 5	18	17	0	60 60
E	LS L	136 192	10,880 10,560	1,360 960	12,240 11,520	204.0 192.0	3,325.2 1,708.8	4:30 AM to 10:00 PM 4:00 AM to 2:00 AM	9 12	12	12	12 12	12	6	60 60
1L 2	L LS L	91 158	6,370 9,776	455 889	6,825 10,665	113.8 177.8	1,533.3 1,449.7	4:00 AM to 1:30 AM 4:10 AM to 1:44 AM	7 9	7 13	5 10	7 12	7 8	5 3	60 40
3 4	L	143 117	9,386 9,360	1,167 1,170	10,553 10,530	175.9 175.5	1,836.6 1,392.3	4:15 AM to 1:26 AM 5:00 AM to 12:30 AM	- 8 - 5	18 12	11 9	14 12	6 12	2 4	60 40
5	CC	55 95	1,483 5,545	157 437	1,640 5,982	27.3 99.7	281.3 838.2	5:36 AM to 10:02 PM 5:03 AM to 11:58 PM	0	3 10	2	3 10	2	0	40 40
7	CC	80	2,448	305 556	2,753	45.9 73.8	480.3	4:39 AM to 11:07 PM	2	7	2	5	2	0	40
9	CC	95 40	6,474 1,569	960 106	7,434 1,675	123.9 27.9	1,316.0 419.4	5:10 AM to 12:56 AM 4:53 AM to 10:41 PM	2	13	5	12	4	2	40 30
11	L	33	1,826	172	1,998	33.3 346.5	515.9	5:48 AM to 10:14 PM 5:00 AM to 1:00 AM	0	4	2	4	2	10	40
15 16	CC	56 10	1,082	78	1,160	19.3	508.7	5:30 AM to 10:23 PM	0	2	1 0	2	1 0	0	30 35
17	CC	65 72	907 3,960	242 360	1,149 4,320	19.2 72.0	120.5 518.4	Peak Period 6:00 AM to 9:48 PM 6:00 AM to 12:00 AM	0	1 4	1 4	2	1	0 4	40 40
18 19	CC	109	7,843	1,120	8,963	149.4	1,698.4	4:13 AM to 1:48 AM	5	18	17	20	10	5	60
20 23	Ĺ	38 64	3,417 6,080	774 640	4,191 6,720	69.9 112.0	645.4 1,315.2	5:14 AM to 7:33 PM 6:00 AM to 10:00 PM	0	5 7	7	5 7	7	0	60 40
31 32	CC L	42 45	1,333 2,314	51 243	1,384 2,557	23.1 42.6	336.6 692.3	4:30 AM to 10:11 PM 5:10 AM to 9:50 PM	1	2 4	1 2	2 4	2	0	35 35
40 41	L	138 75	19,671 1,698	1,402 381	21,073	351.2 34.7	5,577.7 744.5	4:00 AM to 3:59 AM 4:47 AM to 10:10 PM	10	17	10 2	22	20	0	60 40
42 43	L	122 42	14,529 3,003	1,208 295	15,737 3,298	262.3 55.0	3,300.6 917.7	4:00 AM to 3:59 AM 7:00 AM to 6:27 PM	8	19 5	9 5	19 5	12	7	60 40
50 51	L	72 68	5,760 6,516	720 859	6,480 7,375	108.0 122.9	1,116.7 1,666.2	5:00 AM to 11:00 PM 4:30 AM to 1:37 AM	2 5	15	6 7	6 15	6	0 4	40 60
52 53	L	75 72	7,875 4,964	1,125 350	9,000 5,314	150.0 88.6	2,808.8 1,102.6	4:00 AM to 3:59 AM 4:49 AM to 11:26 PM	5 4	10 9	8	10 9	8 4	4 0	60 60
54 55	L	91 68	5,711 10,336	366 1,020	6,077 11,356	101.3 189.3	1,303.6 3,775.0	5:00 AM to 11:11 PM 4:00 AM to 3:59 AM	0 2	8	5 11	8	5 11	0 4	60 60
56 57	Ĺ	60 78	4,626 4,612	454 774	5,080 5,386	84.7 89.8	1,440.0	4:48 AM to 10:37 PM 4:58 AM to 11:30 PM	3 2	7	5 5	10 5	4 5	0	40 40
57A 65	Ī	28 46	1,372	200	1,572 3,109	26.2 51.8	440.6 866.9	5:32 AM to 6:25 PM 5:12 AM to 10:15 PM	0	3	2	3	0	0	40 40
70 71	CC	25 14	840	33 24	873 282	14.6	318.7 77.8	6:09 AM to 7:45 PM Peak Period	0	1	1 0	1	1 0	0	35 35
73 74	CC	47 14	258 459 295	229 47	688 342	11.5 5.7	197.8 65.6	6:14 AM to 5:47 PM Peak Period	0	1	1 0	1	0	0	35 35 35
77	CC	17	635 300	127	762 360	12.7	226.7	5:32 AM to 6:22 PM	0	1 0.5	1 0.5	1 0.5	0	0	35 30
131	CC	24	300	60	360	6.0	70.8	6:00 AM to 6:35 PM 6:20 AM to 6:45 PM	0	0.5	0.5	0.5	0	0	30
133 134	CC	58 58	725 1,595	145 145	870 1,740	14.5 29.0	200.1 455.3	5:30 AM to 10:00 PM 5:30 AM to 10:00 PM	2	2	2	2	1	0	30 30
231 232	CC	60 46	750 575	150 115	900 690	15.0 11.5	293.7 174.1	5:00 AM to 1:00 AM 5:00 AM to 8:00 PM	1	1	0.5 0.5	1	0.5	0.5	35 35
401 402	CC	36 36	456 410	84 130	540 540	9.0 9.0	161.5 127.8	3:50 AM to 9:34 PM 4:20 AM to 9:58 PM	0.5	0.5	0.5	0.5	0.5	0	35 35
403 411	CC	37 74	963 1,044	118 90	1,081	18.0 18.9	322.0 268.6	4:15 AM to 10:22 PM 4:30 AM to 12:49 AM	1	1	1	1	1	0	35 40
412 413	CC	58 36	522 426	348 114	870 540	14.5 9.0	158.9 167.2	4:30 AM to 6:48 PM 5:30 AM to 5:55 PM	1	1	1	1	1 0	0	35 40
414 415	CA CC	29 66	349 2,652	502 393	851 3,045	14.2 50.8	106.6 708.2	4:30 AM to 6:43 PM 5:30 AM to 11:00 PM	1 3	1 4	1 3	1 4	3	0	Handi-Van Vehicle 40
416 417	CC	64 76	800 950	160 190	960 1,140	16.0 19.0	166.4 408.5	5:30 AM to 10:00 PM 5:00 AM to 12:30 AM	1	1	1	1	1	0	40 40
418 419	CC	68 68	1,870 850	170 170	2,040 1,020	34.0 17.0	370.9 241.4	5:00 AM to 11:00 PM 5:00 AM to 11:00 PM	2	2	1	2	2	0	40 40
421 422	CC	37 76	2,035 2,090	185 190	2,220 2,280	37.0 38.0	494.7 614.8	4:33 AM to 12:03 AM 5:00 AM to 12:30 AM	2	2	2	2	2	0	40 40
432 433	CC	147 67	1,837 1,480	370 153	2,207 1,633	36.8 27.2	391.0 328.0	4:41 AM to 1:28 AM 5:00 AM to 11:26 PM	2	2	2	2	2	1	40 40
434 440	CC	107	2,007	136	2,143	35.7 16.5	474.2 184.8	4:41 AM to 12:52 AM 5:00 AM to 10:00 PM	2	2	2	2	2	1 0	40 40
441	CC	66 66	1,815 825	165 165	1,980 990	33.0 16.5	369.6 260.7	5:00 AM to 10:00 PM 5:30 AM to 10:00 PM	2	2	2	2	2	0	40 40 40
501 502	CC	66 34	825 722	165 177	990 899	16.5 15.0	214.5	5:30 AM to 10:00 PM 4:33 AM to 7:53 PM	0	1	1	1	1	0	35
503 504	CA CC	20	550	50	600	10.0	112.0	5.30 AM to 7:00 PM	0	0.75	0.75	0.75	0.00	0	Handi-Van Vehicle 35
505 511	CC	20 76	150 950	50 190	1,140	3.3 19.0	41.0 235.6	5:30 AM to 7:00 PM 4:30 AM to 11:30 PM	0	0.25	0.25	0.25	0.00	0	35 40
512 513	CC	60 68	750 850	150 170	900 1,020	15.0 17.0	180.0 151.3	5:00 AM to 8:00 PM 5:00 AM to 1:00 AM	1	1	1	1	1	0	40 40
521 522	CC	30 30	375 375	75 75	450 450	7.5 7.5	136.7 216.0	5:00 AM to 8:00 PM 5:00 AM to 8:00 PM	0.5	0.5	0.5 0.5	0.5	0.5	0	35 35
FERRY ROUTES 4F	F	7	385	35	420	7.0	64.4	Peak Period	0	4	0	4	0	0	40
8F 30F	F	7	490 280	35 35	525 315	8.8 5.3	86.8 50.4	Peak Period Peak Period	0	5	0	5 3	0	0	40 40
41F 93F	F	3 3 3	165 360	15 0	180 360	3.0 6.0	36.3 96.9	Peak Period Peak Period	0	2	0	2	0	0	40 40
411F 413F	F	3 6	165 180	15 0	180 180	3.0 3.0	40.8 42.6	Peak Period Peak Period	0	2	0	2	0	0	35 40
EXPRESS ROUTES 80	Х	11	618	0	618	10.3	203.7	Peak Period	0	4	0	2	0	0	40
80A 80B	X	9	639 79	0	639 79	10.7	166.1 22.3	Peak Period Peak Period	0	3	0	2	0	0	40 40
81 82	X	22	1,288	0	1,288	21.5	452.4 109.8	Peak Period Peak Period	0	6	0	6	0	0	60 40
83 83A	X	17	1,366	0	1,366	22.8	489.3 106.2	Peak Period Peak Period	0	6 2	0	6 2	0	0	60 60
84 84A	X	8	583 583	0	583 583	9.7	219.6 206.6	Peak Period Peak Period	0	4	0	4	0	0	60 40
85 85A	X	8	613 309	0	613	10.2	181.3 95.0	Peak Period	0	6 3	0	5 2	0	0	40 40 40
86	Х	2 2	128 136	0	128	2.1 2.3	95.0 51.8 56.7	Peak Period	0	1 1	0	1 1	0	0	40 40 40
86A 88	X	4	194	0	136 194	3.2	64.7	Peak Period Peak Period	0	2	0	3	0	0	40
88A 89	X	4	702 216	0	702 216	11.7 3.6	301.9 71.8		0	1	0	2	0	0	40 40
90 92	X	6	210 462	0	210 462	3.5 7.7	153.6	Peak Period Peak Period	0	2	0	3	0	0	40 40
93 93A	X	29 2	2,266 152	0	152	37.8 2.5	74.2	Peak Period Peak Period	0	9	0	9	0	0	60 40
95 96	X	2	169 182	0	169 182	2.8 3.0	62.0 70.3	Peak Period Peak Period	0	1	0	1 2	0	0	40 40
97 98	X	8	380 322	0	380 322	6.3 5.4	153.6	Peak Period Peak Period	0	1 2	0	3	0	0	40 60
101	X	10	550 390	0	550 390	9.2	221.4 150.5		0	2	0	5	0	0	60
103 203	X	4	206 232	0	206 232	3.4	66.7	Peak Period Peak Period	0	2 2	0	2	0	0	40 40
TOTALS		5,911	306,222	33,528	339,750	5,662.5	77,003.7		188	502	305	511	276	77	79
				1				1		<u> </u>					

# Bus Operating Plan – Alternative #2, TSM

ROUTE					WEEKDAY Weeks	OPERATION TOTALS	NS			Max		EEKDAY hicles Red		IONS	
Number	Function	Weekday Trips	Running Time (Minutes)	Layover (minutes)	Total Time (minutes)	Total Time Hours	Total Weekday Mileage	Span of Service	4:00 AM to 5:29 AM	5:30 AM to 8:59 AM	9:00 AM to 2:59 PM	3:00 PM to 5:59 PM	6:00 PM to 10:59 PM	11:00 PM to 3:59 AM	Vehide Size
A B	LS LS	158 129	15,166 5,223	1,264	16,430 6,624	273.8 110.4	3,487.6 1,006.2	4:15 AM to 10:37 PM 4:55 AM to 11:02 PM	6	25 7	14	26 7	12 7	0	60 60
D E	LS LS	230 96 149	17,392 6,720 11,920	2,390 480 1,490	19,782 7,200 13,410	329.7 120.0 223.5	7,446.2 2,430.7 3,643.1	3:07 AM to 10:53 PM 5:00 AM to 10:00 PM 4:30 AM to 10:00 PM	8 4 8	30 10 15	15 5 12	30 10 15	13 8 12	0	60 60 60
1 1L	LS	184 138	10,120 9,660	920 690	11,040 10,350	184.0 172.5	1,713.0 2,044.5	4:00 AM to 2:00 AM 4:00 AM to 1:30 AM	12 6	12 13	8	12 13	12 6	6 5	60 60
2 3 4	L L	158 143 117	9,776 9,386 5,850	1,167 1,170	10,665 10,553 7,020	177.8 175.9 117.0	1,449.7 1,744.2 1,041.3	4:10 AM to 1:44 AM 4:15 AM to 1:26 AM 5:00 AM to 12:00 AM	9 8 5	13 18 8	10 11 6	12 14 8	7 6 8	3 2 4	40 60 40
5 6	CC	55 95	1,207 5,384	174 437	1,381 5,821	23.0 97.0	281.3 838.2	5:36 AM to 10:02 PM 5:03 AM to 11:58 PM	1	10	7	10	3	0	40 40 80
9	L L	95 33	6,474 1,826	960 172	7,434 1,998	123.9 33.3	1,316.0 515.9	5:10 AM to 12:56 AM 5:48 AM to 10:14 PM	2	13	5 2	12 4	4 2	2	40 40
13 15 17	CC	198 56 134	18,810 1,082 6,700	1,980 78 1,340	20,790 1,160 8,040	346.5 19.3 134.0	2,138.4 508.7 1.165.8	5:00 AM to 1:00 AM 5:30 AM to 10:23 PM 5:00 AM to 12:00 AM	0 4	21 2 12	21 1 6	21 2 8	10 1 8	10 0 4	80 30 40
18 19	CC	72 109 38	3,960 7,843 3,417	360 1,120 774	4,320 8,963 4,191	72.0 149.4 69.9	518.4 1,698.4 645.4	6:00 AM to 12:00 AM 4:13 AM to 1:48 AM 5:14 AM to 7:33 PM	5	18	4 17	20	4 10	4 5 0	40 60 60
23 30	L	64 70	6,080 3,500	640 700	6,720 4,200	112.0 70.0	1,315.2 514.5	6:00 AM to 10:00 PM 5:00 AM to 12:00 AM	2	7 4	7 4	7 4	7 4	2	40 40
31 40 41	Ė	45 126 98	2,314 18,670 2,264	1,800 508	2,557 20,470 2,772	42.6 341.2 46.2	692.3 5,091.9 955.0	5:10 AM to 9:50 PM 4:00 AM to 3:59 AM 4:47 AM to 10:10 PM	17 2	4 22 4	11 2	4 22 4	11 2	8	35 60 40
42 43 50	L	122 42 103	14,529 2,989 8,240	1,208 295 1,030	15,737 3,284 9,270	262.3 54.7 154.5	3,300.6 917.7 1.597.5	4:00 AM to 3:59 AM 7:00 AM to 6:27 PM 5:00 AM to 11:00 PM	0	19 5 12	9 5 6	19 5 12	12 0 6	7 0 0	40 40
51 52	Ĺ	68 75 181	6,583 7,875	680 1 125	7,263 9,000	121.1 150.0	1,666.2 2,808.8	4:30 AM to 1:37 AM 4:00 AM to 3:59 AM	5	14	7 8	14 10	4 8	4	60 60
64 60 61	L	96 76	7,307 6,240 3,800	1,810 960 760	9,117 7,200 4,560	152.0 120.0 76.0	2,112.3 1,804.8 1,094.4	4:30 AM to 1:00 AM 5:00 AM to 12:00 AM 5:00 AM to 11:00 PM	6 2 2	11 10 6	5 4	11 10 8	6 5 4	3 0	60 40 40
62 63 64	L	88 78 81	14,416 5,850 4,455	1,320 1,170 405	15,736 7,020 4,860	262.3 117.0 81.0	4,885.3 1,891.5 996.3	4:00 AM to 3:59 AM 5:00 AM to 12:00 AM 5:00 AM to 10:00 PM	2 3	18 9 6	12 6 4	18 9 6	12 6 4	6 2 0	60 40 40
65 66	L	42 50	1,680 1,250	210 250	1,890	31.5 25.0	497.7 669.8	5:00 AM to 8:00 PM 4:30 AM to 10:00 PM	2	3 2	2	3	1	0	40 40
131 132 133	CC	24 24 58	300 300 725	60 60 145	360 360 970	6.0 6.0 14.5	67.2 70.8 200.1	6:00 AM to 6:35 PM 6:20 AM to 6:45 PM 5:30 AM to 10:00 PM	0 0 1.0	0.5 0.5 1.0	0.5 0.5 1.0	0.5 0.5 1.0	0 0.5	0.0	30 30 30
134 231 232	CC CC	58 60 46	1,595 750 575	145 150 115	1,740 900 690	29.0 15.0 11.5	455.3 270.0 154.1	5:30 AM to 10:00 PM 5:00 AM to 1:00 AM 5:00 AM to 8:00 PM	2.0 1.0 1.0	2.0 1.0 1.0	2.0 0.5 0.5	2.0 1.0 1.0	1.0 0.5 0.5	0.0 0.5 0.0	30 35 35
301 302	CC	57 47	2,387 1,175	285 235 270	2,672 1,410	11.5 44.5 23.5 27.0	590.1 164.5	5:00 AM to 8:00 PM 4:30 AM to 10:11 PM	3	3 2	3	3 2	2	0	35 40
303 304 305	00	108 47 99	1,350 1,282 2,485	270 235 490	1,620 1,517 2,975	27.0 25.3 49.6	194.4 385.0 577.7	4:30 AM to 12:00 AM 5:00 AM to 11:00 PM 5:00 AM to 11:00 PM	1 1 4	2 2	1 1 2	2 4	1 2	0 0	40 30 40
401 402 409	CC	48 48 49	612 548 1,284	108 172 157	720 720 1,441	12.0 12.0 24.0	215.3 170.4 424.8	3:50 AM to 9:34 PM 4:20 AM to 9:58 PM 4:15 AM to 10:22 PM	0.5 0.5	1.0	0.5	1.0	0.5	0.0	35 35 35
403 411 412	CC CC	100 84	1,408 756	116 504	1,524 1,260	25.4 21.0	357.3 230.2	4:30 AM to 12:49 AM 4:30 AM to 6:48 PM	1	2 2	1	2 2	1	1.0	40 35
413 414 415	CC CA CC	59 29 90	899 349 2.475	186 502 225	885 851 2.700	14.8 14.2 45.0	273.2 106.6 702.0	5:30 AM to 5:55 PM 4:30 AM to 6:43 PM 5:30 AM to 11:00 PM	1 1 2	1 4	1.0	1 4	1 2	0	40 Handi-Van Veh 40
416 417	CC CC	88 100	1,100 1,250 2,530	220 250 230	2,700 1,320 1,500 2,760	22.0 25.0 46.0	228.8 380.0	5:30 AM to 10:00 PM 5:00 AM to 12:30 AM	1	2	1	2 2	1	0	40 40
418 419 421	CC	92 92 71	2,530 1,150 3,905	230 230 355	1,380 4,260	23.0 71.0	449.9 326.6 949.3	5:00 AM to 11:00 PM 5:00 AM to 11:00 PM 4:33 AM to 12:03 AM	1 2	2 B	1.0	4 2 8	1 2	0	40 40 40
422 432 433	00 00	13D 147 91	3,575 1,837 2,024	325 370 209	3,900 2,207	85.0 36.8 37.2	1,051.7 391.0 448.0	5:00 AM to 12:30 AM 4:41 AM to 1:28 AM 5:00 AM to 11:26 PM	2	8 2 4	2 2 2	6 2 4	2	1 1	40 40 40
434 435	CC	140 62	2,619 1,550	176 310	2,233 2,795 1,860	46.6 31.0	618.2 403.0	4:41 AM to 12:52 AM 6:30 AM to 10:00 PM	2	4 2	2 2	4 2	2	1 0	40 40
440 441 501	CC	90 90 64	1,125 2,475 800	225 225 160	1,350 2,700 960	22.5 45.0 16.0	252.0 504.0 252.8	5:00 AM to 10:00 PM 5:00 AM to 10:00 PM 5:30 AM to 10:00 PM	2 0	4	2	4	2	0	40 40 40
502 503 504	CA CC	64 34 36	722 990	160 177 90	960 899 1,080	16.0 15.0 18.0	208.0 148.4 201.6	5:30 AM to 10:00 PM 4:33 AM to 7:53 PM 5:30 AM to 10:00 PM	0 1 0.00	1 1 1.50	1 1 0.75	1 1 1.50	1 1 0.75	0 0.00	35 Handi-Van Veh 35
505 511	CC	36 100	1.250	90 250	360 1,500	6.0 25.0	73.8 310.0	5:30 AM to 10:00 PM 4:30 AM to 11:30 PM	0.00	0.50	0.25	0.50	0.25	0.00	35 40
512 513 521	CC	72 68 42	900 850 525	180 170 105	1,080 1,020 630	18.0 17.0 10.5	216.0 151.3 191.3	5:00 AM to 11:00 PM 5:00 AM to 1:00 AM 5:00 AM to 8:00 PM	1 0.5	1 1.0	1 0.5	1 1.0	1 0.5	0 1 0.0	40 40 35
522 523 541	00 00	42 34 98	525 850 2,450	105 170 490	630 1,020 2,940	10.5 17.0 49.0	302.4 292.4 661.5	5:00 AM to 8:00 PM 5:00 AM to 9:00 PM 5:30 AM to 10:00 PM	0.5 1.0 2.0	1.0 1.0 4.0	0.5 1.0 2.0	1.0 1.0 4.0	0.5 1.0 2.0	0.0 0.0 0.0	35 35 35
542 543	CC	72 94	900 1,175	180 235	1,080	18.0 23.5	262.1 244.4	5:30 AM to 10:00 PM 5:30 AM to 9:00 PM	2.0	1.0	1.0	1.0	1.0	0.0	35 35
544 545 548	CA CC	64 70 62	800 875 775	160 175 155	960 1,050 930	16.0 17.5 15.5	201.0 245.0 235.9	5:30 AM to 9:00 PM 5:30 AM to 9:00 PM 5:30 AM to 9:00 PM	1.0 2.0 1.0	1.0 1.0	1.0 1.0	1.0 1.0	1.0 1.0	0.0 0.0	Handi-Van Veh 35 35
547 548 549	CC CC	115 116 76	2,300 2,320 950	285 290 190	2,585 2,610 1,140	43.1 43.5 19.0	736.5 461.7 273.6	4:30 AM to 12:30 AM 4:30 AM to 12:30 AM 6:30 AM to 10:00 PM	3.0 3.0 2.0	3.0 3.0 1.0	1.5 1.5 1.0	3.0 3.0 1.0	1.5 1.5 1.0	1.5 1.5 1.0	40 40 40
611 612	CC	48 48	960 960	120 120	1,080	18.0 18.0	568.8 312.0	5:00 AM to 10:00 PM 5:00 AM to 10:00 PM	1.5	1.5	0.8	1.5	0.8	0.0	35 35
813 614 815	CA CA CC	34 34 34	425 425 850	85 85 170	510 510 1,020	8.5 8.5 17.0	95.2 227.8	5:00 AM to 9:30 PM 5:00 AM to 9:00 PM 5:00 AM to 9:00 PM	0.5 0.5 1.0	0.5 0.5 1.0	0.5 0.5 1.0	0.5 0.5 1.0	0.5 0.5 1.0	0.0 0.0	Handi-Van Veh Handi-Van Veh 35
RRY ROUTES 4F 8F	F	32 32	1,045	95 95	1,140	19.0	174.8 235.6	Peak Period Peak Period	0	4 5	0	4 5	4 5	0	40 40
30F 41F	F	32 12	760 440	95 40	855 480	14.3 8.0	136.8 96.8	Peak Period Peak Period	0	3	0	3	3 4	0	40 40
93F 411F 413F	F	12 12 12	1,200 550 330	50 0	1,200 600 330	20.0 10.0 5.5	323.0 136.0 78.1	Peak Period Peak Period Peak Period	0 0	3	0 0	3	2 1	0	40 35 40
PRESS ROUTES 80 80A	X	11	618 639	0	618 639	10.3	203.7	Peak Period Peak Period	0	4 3	0	1	0	0	40 40
80B 81	X	2 22	1.288	0	79 1,288	1.3	22.3 452.4	Peak Period Peak Period	0	1 6	0	1 6	0	0	40 60
82 83 83A	X	7 17 4	354 1,366 253	0	354 1,366 253	5.9 22.8 4.2	109.8 489.3 106.2	Peak Period Peak Period Peak Period	0 0	3 B	0	6 2	0	0	40 60 40
84 84A 85	X	8 8 8	583 583	0	583 583	9.7 9.7 10.2	219.6 206.6 181.3	Peak Period Peak Period	0	4 4 6	0	4 4 5	0	0	60 40 40
85A 86	X X X	6 2	613 309 128	0	613 309 128	5.2 2.1	95.0 51.8	Peak Period Peak Period Peak Period	0 D	3	0	2	0	0	40 40
86A 88 88A	X	2 4 4	136 194 702	0 0	136 194 702	2.3 3.2 11.7	56.7 64.7 301.9	Peak Period Peak Period Peak Period	0	2 2	0	3 2	0	0 0	40 40 40
99 90	X	4	216 210	0	218 210	3.6 3.5 7.7	71.8 63.8	Peak Period Peak Period	0	1 2	0	2	0	0	40 40
92 93 93A	X	8 29 2	462 2,266 152	0	462 2,266 152	7.7 37.8 2.5 2.8	153.6 969.5 74.2	Peak Period Peak Period Peak Period	0	9	0	9	0	0	40 60 40
95 96 97	X X	2 4 8	169 182 380	0	169 182 380	2.8 3.0 6.3	62.0 70.3 153.6	Peak Period Peak Period Peak Period	0 0	1 1	0	2 2	0	0	40 40 40
98 101	X	12 10	644 550	0	644 550	10.7	274.0 221.4	Peak Period Peak Period	2 0	4 2	0	6	0	0	60 60
102 103 203	X	6 4 4	390 206 232	0	390 206 232	8.5 3.4 3.9	150.5 66.7 40.4	Peak Period Peak Period Peak Period	0	2 2 2	0	2 2	0	0	60 40 40
434X 440X 441X	X	8 8 8	416 372 352	0	416 372 352	6.9 6.2 5.9	169.6 152.8 134.4	Peak Period Peak Period Peak Period	0	4 4	0	4 4	0	0	40 40 60
TOTALS	X	8,332	374,619	47,317	421,936	7,032.3	94,526.9	Lan I CIUU	229	638	339	638	320	98	60

### Bus Operating Plan – Alternative #3, Managed Lane – Two-Direction

Number	Function	Weekday	Running	Lavover	Week Total Time	day Totals Total Time	Total Weekday		4:00 AM to 5:29	5:30 AM to 8:59	9:00 AM to 2:59	3:00 PM to 5:59	operati quired 6:00 PM to 10:59	11:00 PM to 3:59	
A B	LS	Trips 158	(Minutes)	(minutes) 1,264	(minutes) 16,430	10tal lime Hours 273.8 110.4	Weekday Mileage 3,487.6 1,006.2	Span of Service 4:15 AM to 10:37 PM	AM 6	AM 25	PM 14	PM 26	PM 12	AM 0	Vehicle Size
C D	LS LS	129 134 96	13,267 6,720	1,401 1,479 480	6,624 14,746 7,200	245.8 120.0	5,262.4 2,430.7	4:55 AM to 11:02 PM 3:07 AM to 10:53 PM 5:00 AM to 10:00 PM	8 4	15	15	15	15	0	60 60
E 1	LS L	149 184	11,920 10,120	1,490 920 690	13,410 11,040 10,350	223.5 184.0	3,643.1 1,713.0 2,044.5	4:30 AM to 10:00 PM 4:00 AM to 2:00 AM 4:00 AM to 1:30 AM	12	15 12	12	15	12	6	60 60
2	L	158 158	9,776	889 1,167	10,665	177.8 176.9		4:10 AM to 1:44 AM 4:15 AM to 1:26 AM	9	13	10	12	7 6	3 2	40 60
5	- 00	117 55 95	5,850 1,207	1,170 174 437	7,020 1,381	117.0 23.0 97.0	281.3	5:00 AM to 12:00 AM 5:36 AM to 10:02 PM	5	8 2 10	6	2	8	4 0 0	40 40 40
8 9	L	178 95	5,384 7,120 6,474	890 960	5,821 8,010 7,434	133.5 123.9	838.2 792.1 1,316.0	5:03 AM to 11:58 PM 7:15 AM to 12:00 AM 5:10 AM to 12:56 AM	0 2	6	9	10 9 12	9	2	60 40
11 13 15	L CC	69 198 56	3,831 18,810 1,082	292 1,980 78	4,123 20,790 1,160	68.7 346.5 19.3	1,074.6 2,138.4 508.7	5:48 AM to 10:14 PM 5:00 AM to 1:00 AM 5:30 AM to 10:23 PM	8 0	21	2 21 1	21	10	0 10 0	40 60 30
17 18	CC	134	6,700 3,960	1,340	8,040 4,320	134.0 72.0	1,165.8 518.4	5:00 AM to 12:00 AM 6:00 AM to 12:00 AM	4	12	6	8	8	4	40 40
19 20	L	109 38 64	7,843 3,417 6,080	1,120 774 640	8,963 4,191 6,720	149.4 69.9 112.0	1,698.4 645.4 1,315.2	4:13 AM to 1:48 AM 5:14 AM to 7:33 PM 6:00 AM to 10:00 PM	5 1 0	18 5	17 6 7	20 5	10 1 7	5 0 0	60 60 40
23 30 31	L	70 75 126	3,500 3,921	700 471	4,200 4,392 20,470	70.0 73.2 341.2	514.5 1,148.8	5:00 AM to 12:00 AM 5:10 AM to 9:50 PM	2	4 8	4 2	4 8	4 2	2	40 35
40 41 42	L	126 98 122	18,670 2,264 14,529	1,800 508	20,470 2,772 15,737	341.2 46.2 262.3	5,091.9 955.0 3,300.6	4:00 AM to 3:59 AM 4:47 AM to 10:10 PM 4:00 AM to 3:59 AM	17 2 8	22 4 19	11 2 9	22 4 19	11 2 12	0 7	60 40 60
43 50	L	103	2,989 8,240	1,208 295 1,030	3,284 9,270 7,263	54.7	917.7 1,597.5	7:00 AM to 6:27 PM 5:00 AM to 11:00 PM	0	5 12	5 6	5 12	D 6	0	40 40
51 52 54	L	68 75 181	6,583 7,875 7,307	1,125 1,810	7,263 9,000 9,117	121.1 150.0 152.0	1,666.2 2,808.8 2,112.3	4:30 AM to 1:37 AM 4:00 AM to 3:59 AM 4:30 AM to 1:00 AM	5	14 10	7 8 6	14 10	8	4 4	60 60
60 61	L	96 76	6,240 3,800	960 760	7,200 4,560	120.0 76.0	1,804.8 1,094.4	5:00 AM to 12:00 AM 5:00 AM to 11:00 PM	2	10	5 4	10 6	5 4	3	40 40
62 63 64	-	78 81	14,416 5,850 4,455	1,320 1,170 405	15,736 7,020 4,860	262.3 117.0 81.0		4:00 AM to 3:59 AM 5:00 AM to 12:00 AM 5:00 AM to 10:00 PM	2 3	18 9 6	12 6 4	18 9 6	12 6 4	6 2 0	60 40 40
65 66	دد	42 50	1,680 1,250 300	210 250	1,890	31.5 25.0	497.7 669.8	5:00 AM to 8:00 PM 4:30 AM to 10:00 PM	2	3 2	2	3 2	1	0	40 40
131 132 133	CC CC	24 24 58	300 725	60 60 145	360 360 870	6.0 6.0 14.5	67.2 70.8 200.1	6:00 AM to 6:35 PM 6:20 AM to 6:45 PM 5:30 AM to 10:00 PM	0 0 1.0	0.5 0.5 1.0	0.5 0.5 1.0	0.5 0.5 1.0	0 0.5	0 0.0	30 30 30
134 231	CC	58 60 46	1,595 750 575	145 150 115	1,740 900 690	29.0 15.0	455.3 270.0	5:30 AM to 10:00 PM 5:00 AM to 1:00 AM	2.0 1.0 1.0	2.0 1.0 1.0	2.0 0.5 0.5	2.0 1.0 1.0	1.0 0.5	0.0 0.5 0.0	30 35 35
301 302	00 00	57 47	2,387 1,175	285 235	2,672 1,410	11.5 44.5 23.5	590.1 164.5	5:00 AM to 8:00 PM 5:00 AM to 8:00 PM 4:30 AM to 10:11 PM	3	3	3	3 2	0.5 2 1	0.0	35 40
303 304 305	CC CC	108 47 99	1,350 1,282 2,485	270 235 490	1,620 1,517 2,975	27.0 25.3 49.6	194.4	4:30 AM to 12:00 AM 5:00 AM to 11:00 PM 5:00 AM to 11:00 PM	1 1	2 2	1 1 2	2 2	1 2	1 0 0	40 30 40
401 402	00 00	48 48 49	548 1,284	108 172 157	720 720	12.0 12.0 24.0	215.3 170.4	3:50 AM to 9:34 PM 4:20 AM to 9:58 PM	0.5 0.5	1.0	0.5 0.5	1.0	0.5 0.5	0.0	35 35 35
403 411 412	CC CC	49 100 84	1,284 1,408 756	157 116 504	1,441 1,524 1,260	24.0 25.4 21.0	424.8 357.3	4:15 AM to 10:22 PM 4:30 AM to 12:49 AM 4:30 AM to 6:48 PM	1 1	2 2	1 1	2 2	1	0 1.0 0	35 40 35
412 413 414	GC GA	59 29	699 349	186 502	885 851	14.8 14.2	273.2 106.6	5:30 AM to 5:55 PM 4:30 AM to 6:43 PM	1	2	1.0	2	0	0	40 Handi-Van Veh
415 416 417	00 00	90 88 100	2,475 1,100	225	2,700 1,320 1,500	45.0 22.0 25.0	702.0 228.8 380.0	5:30 AM to 11:00 PM 5:30 AM to 10:00 PM 5:00 AM to 12:30 AM	1 1	2	1 1	2	1 1	0	40 40 40
418 419	CC	92 92	1,250 2,530 1,150	230 230	2,760 1,380	46.0 23.0	449.9 326.6	5:00 AM to 11:00 PM 5:00 AM to 11:00 PM	2	4 2	1.0	4 2	2	0	40 40
421 422 432	00 00	71 130 147	3,905 3,575 1,837	355 325 370	4,260 3,900 2,207	71.0 65.0 36.8	949.3 1,051.7 391.0	4:33 AM to 12:03 AM 5:00 AM to 12:30 AM 4:41 AM to 1:28 AM	2 2	6	2 2	6	2 2	2	40 40 40
433 434	CC CC	91 140	2,024 2,619	209 176	2,233	37.2 46.6	448.0 618.2	5:00 AM to 11:26 PM 4:41 AM to 12:52 AM	1 2	4	2 2	4	1 2	1	40 40
435 440 441	00 00	90 90	1,550 1,125 2,475	310 225 225	1,860 1,350 2,700	31.0 22.5 45.0	403.0 252.0 504.0	6:30 AM to 10:00 PM 5:00 AM to 10:00 PM 5:00 AM to 10:00 PM	2	2 2	1 2	2 2	1 2	0	40 40 40
501 502	CC	64 64	800	160 160	960 960	16.0 16.0	252.8 208.0	5:30 AM to 10:00 PM 5:30 AM to 10:00 PM	0	1	1	1	1	0	40 35
503 504 505	CA CC CC	34 36 36	722 990 270 1,250	177 90 90	899 1,080 360	15.0 18.0 6.0	148.4 201.6 73.8	4:33 AM to 7:53 PM 5:30 AM to 10:00 PM 5:30 AM to 10:00 PM	0.00	1.50	0.75 0.25	1.50	0.75 0.25	0.00 0.00	Handi-Van Veh 35 35
511 512	CC	100 72 68	1,250 900 850	250 180 170	1,500 1,080 1,020	25.0 18.0 17.0	310.0 216.0 151.3	4:30 AM to 11:30 PM 5:00 AM to 11:00 PM 5:00 AM to 1:00 AM	1	1	1	1	1	0	40 40 40
521 522	CC	42 42	525 525	105 105	630 630	10.5	191.3	5:00 AM to 8:00 PM 5:00 AM to 8:00 PM	0.5	1.0	0.5	1.0	0.5	0.0	35 35
523 541 542	00 00	98 72	2,450 900	170 490 180	1,020 2,940 1,080	17.0 49.0 18.0	292.4 661.5 262.1	5:30 AM to 9:00 PM 5:30 AM to 10:00 PM 5:30 AM to 10:00 PM	1.0 2.0 2.0	1.0 4.0 1.0	1.0 2.0 1.0	1.0 4.0 1.0	1.0 2.0 1.0	0.0 0.0 0.0	35 35 35
542 543 544	CC CA	94 64	1,175 800	235 160	1,410 960	23.5 16.0	244.4 201.0	5:30 AM to 9:00 PM 5:30 AM to 9:00 PM	2.0	2.0	1.0	2.0	1.0	0.0	35 Handi-Van Veh
545 546 547	00 00	70 62 115	875 775 2.300	175 155 285	1,050 930 2,585	17.5 15.5 43.1	245.0 235.9 736.5	5:30 AM to 9:00 PM 5:30 AM to 9:00 PM	2.0 1.0 3.0	1.0	1.0	1.0	1.0	0.0 0.0 1.5	35 35 40
548 549	CC	116 76	2,320 1,250	290 250	2,610 1,500	43.5 25.0	360.0	4:30 AM to 12:30 AM 4:30 AM to 12:30 AM 6:30 AM to 10:00 PM	3.0 2.0	3.0 2.0	1.5	3.0 2.0	1.5 1.5 1.0	1.5	40 40
611 612 613	CC CA	48 48 34	960 960 425	120 120 85	1,080 1,080	18.0 18.0 8.5	568.8 312.0 88.4	5:00 AM to 10:00 PM 5:00 AM to 10:00 PM 5:00 AM to 9:30 PM	1.5 1.5 0.5	1.5 1.5 0.5	0.8 0.8 0.5	1.5 1.5 0.5	0.8 0.8 0.5	0.0 0.0 0.0	35 35 Handi-Van Veh
614 615	CA CC	34 34	425 850	85 170	510 510 1,020	8.5 17.0	95.2 227.8	5:00 AM to 9:00 PM 5:00 AM to 9:00 PM	0.5 1.0	0.5 1.0	0.5 1.0	0.5 1.0	0.5 1.0	0.0	Handi-∀an Veh 35
AF BF	F	32 32	1,045	95 95	1,140 1,425	19.0 23.8	174.8 235.6	Peak Period Peak Period	0	4 5	0	4 5	4 5	0	40 40
30F 41F	F	32 12	760 440	95 40	855 480	14.3 8.0	136.8 96.8	Peak Period Peak Period	0	3	D D	3	3 4	0	40 40
93F 411F 413F	F	12 12 12	1,200 550 330	50 0	1,200 600 330	20.0 10.0 5.5	323.0 136.0 78.1	Peak Period Peak Period Peak Period	0 0	4 3 1	0	4 3 1	2	0 0	40 35 40
RESS ROUTES 80 80A	X	11	618 639	0	618 639	10.3	203.7 166.1	Peak Period Peak Period	0	4 3	0	4 3	0	0	40 40
80B 81	X	2 22	1,288	0	1,288	1.3	22.3 452.4	Peak Period Peak Period	0	1 6	0	1 6	0	0	40 60
82 83 83A	X	7 17 4	354 1,366	0	354 1,366 253	5.9 22.8 4.2	109.8 489.3 106.2	Peak Period Peak Period Peak Period	0 0	6	0	6	0	0	40 60 40
84 84A	X	8	253 583 583	0	583 583	9.7 9.7	219.6 206.6	Peak Period Peak Period	0	4	0	4	0	0	60 40
85 85A 86	X X	6 2	613 309 128	0	613 309 128	10.2 5.2 2.1	51.8	Peak Period Peak Period Peak Period	0	6 3 1	D D	5 2 1	0	0	40 40 40
86A 88 88A	X	2 2 4 4	136 194 702	0	136 194 702	2.3 3.2 11.7	56.7 64.7 301.9	Peak Period Peak Period Peak Period	0	1 2	0	3	0	0	40 40 40
99 90	X	4	216 210	0	216 210	3.6 3.5 7.7	71.8 63.8	Peak Period Peak Period	0	1 2	0	2 2	0	0 0	40 40
92 93 93A	X X	6 33 2	462 2,652 152	0	462 2,652 152	44.2	153.6 1,133.6	Peak Period Peak Period Peak Period	0 0	11	0 0 0	3 11	0	0 0	40 60 40
96 96	X	2 2 8	169 364	0	169 364	2.5 2.8 6.1	62.0 140.6	Peak Period Peak Period	0	1 4	0	1 4	0	0	40 40
97 98 101	X X	12 12 10	570 644 550	0	570 644 550 390	9.5 10.7 9.2	274.0	Peak Period Peak Period Peak Period	2 2	5 4 3	0	5 6 5	0	0	40 60 60
102 103	X	6 8	550 390 412	0	412	9.2 6.5 6.9	150.5 133.4	Peak Period Peak Period	1 0	2 4	0	3 4	0	0	60 40
203 434X	X	4 8 8	232 416 372	0 0	232 416 372	3.9 6.9	40.4 169.6	Peak Period Peak Period	0	2 4 4	0 0 0	2 4 4	0 0	0 0	40 40 40
440X 441X 100X	X X	8 56	352 3,080	0 280	372 352 3,360 2,720	6.2 5.9 56.0	134.4 1,232.0	Peak Period Peak Period 4:30 AM to 7:00 PM	0	4 9	0 2	4 9	0	0	60 60
101X 102X 200V	X	34 34 56	2,550 2,550	170 170	2,720 2,720 2,800	45.3 45.3 46.7	853.4	4:40 AM to 7:00 PM 4:40 AM to 7:00 PM 4:30 AM to 7:00 PM	3 3 6	6 6 8	3	6 6 8	3 6	0	60 60 60
200X 201X 202X	X	34 34	2,520 2,550 2,550	280 170 170	2,720 2,720	45.3 45.3	751.4 765.0	4:40 AM to 7:00 PM 4:40 AM to 7:00 PM	3	6	3	6	3	0	60 60
300X 301X 302X	X	56 34 34	1,960 2,070 2,070	280 170 170	2,240 2,240 2,240	37.3 37.3 37.3	851.2 608.6	4:30 AM to 7:00 PM 4:40 AM to 7:00 PM	6 3 3	7 5 5	2 2 2	7 5 5	6 3 3	0	60 60
BUZX	X	8,690	2,070 397,270	170 48,674	2,240 445,944	37.3 7,432.4	625.6 101,436.0	4:40 AM to 7:00 PM	271	702	361	704	360	0 98	60

# Bus Operating Plan – Alternative #3, Managed Lane – Reversible

Number	Function	Weekday Trips	Running Time (Minutes)	Layover (minutes)	Total Time (minutes)	OPERATIO ay Totals Total Time Hours	Total Weekday Mileage	Span of Service	4:00 AM to 5:29 AM	5:30 AM to 8:59 AM	9:00 AM to 2:59 PM	3:00 PM to 5:59 PM	6:00 PM to 10:59 PM	11:00 PM to 3:59 AM	Vehicle Size
B C D	LS LS LS	158 129 230 96	15,166 5,223 17,392 6,720	1,264 1,401 2,390 480	16,430 6,624 19,782 7,200	110.4 329.7 120.0	7,446.2 2,430.7	4:15 AM to 10:37 PM 4:55 AM to 11:02 PM 3:07 AM to 10:53 PM 5:00 AM to 10:00 PM	8 4	7 30 10	14 7 15 5	26 7 30 10	12 7 13 8	0	60 60 60
1 1 1L	LS L LS	149 184 138 158	11,920 10,120 9,660 9,776	1,490 920 690 889	13,410 11,040 10,350 10,665	223.5 184.0 172.5 177.8	3,643.1 1,713.0 2,044.5 1,449.7	4:30 AM to 10:00 PM 4:00 AM to 2:00 AM 4:00 AM to 1:30 AM 4:10 AM to 1:44 AM	8 12 6 9	15 12 13 13	12 B B 10	15 12 13	12 12 6	0 6 5	60 60 60 40
3 4 5	L L CC	143 117 55	9,386 5,850 1,207	1,167 1,170 174	10,553 7,020 1,381	175.9 117.0 23.0	1,744.2 1,041.3 281.3	4:15 AM to 1:26 AM 5:00 AM to 12:00 AM 5:36 AM to 10:02 PM	8 5	18 8 2	11 6	12 14 8 2	6 8 1	3 2 4 0	60 40 40
6 8 9	L L	95 178 95	5,384 7,120 6,474	437 890 960	5,821 8,010 7,434	97.0 133.5 123.9	838.2 792.1 1,316.0	5:03 AM to 11:58 PM 7:15 AM to 12:00 AM 5:10 AM to 12:56 AM	1 0 2	10 6 13	7 9 5	10 9 12	3 9 4	0 0 2	40 60 40
11 13 15 17	CC CC	69 198 56 134	3,831 18,810 1,082 6,700	292 1,980 78 1,340	7,434 4,123 20,790 1,160 8,040	68.7 346.5 19.3 134.0	1,074.6 2,138.4 508.7 1,165.8	5:48 AM to 10:14 PM 5:00 AM to 1:00 AM 5:30 AM to 10:23 PM 5:00 AM to 12:00 AM	8 0 4	21 2 12	21 1 6	21 2 8	10 1 8	0 10 0 4	40 60 30 40
18 19 20	CC L	72 109 38	3,960 7,843 3,417	360 1,120 774	4,320 8,963 4,191 6,720	72.0 149.4 69.9	518.4 1,698.4 645.4	6:00 AM to 12:00 AM 4:13 AM to 1:48 AM 5:14 AM to 7:33 PM	0 5 1	4 18 5	4 17 6	20 5	10	5 0	40 60 60
23 30 31 40	L L	70 75 126	6,080 3,500 3,921 18,670	640 700 471 1,800	6,720 4,200 4,392 20,470	112.0 70.0 73.2 341.2	1,315.2 514.5 1,148.8	6:00 AM to 10:00 PM 5:00 AM to 12:00 AM 5:10 AM to 9:50 PM 4:00 AM to 3:59 AM	0 2 1	7 4 8	7 4 2	7 4 8	7 4 2	0 2 0	40 40 35
41 42 43	L	98 122 42	2,264 14,529 2,989	508 1,208 295	2,772 15,737	46.2 262.3 54.7	955.0 3,300.6 917.7	4:47 AM to 10:10 PM 4:00 AM to 3:59 AM 7:00 AM to 6:27 PM	2 8 0	4 19 5	2 9 5	4 19 5	2 12 0	7	40 60 40
50 51 52	L L	103 68 76	8,240 6,583 7,875	1,030 680	3,284 9,270 7,263 9,000	154.5 121.1 150.0	1,597.5 1,666.2 2,808.8	5:00 AM to 11:00 PM 4:30 AM to 1:37 AM 4:00 AM to 3:59 AM	3 5 5	12 14 10	6 7 8	12 14 10	6 4 8	0 4 4	40 60 60
54 60 61 62	L	181 96 76 88	7,307 6,240 3,800 14,416	1,810 960 760 1,320	9,117 7,200 4,560 15,736	152.0 120.0 76.0 262.3	2,112.3 1,804.8 1,094.4 4,885.3	4:30 AM to 1:00 AM 5:00 AM to 12:00 AM 5:00 AM to 11:00 PM 4:00 AM to 3:59 AM	2 2 2	11 10 6 18	6 5 4 12	11 10 6	6 5 4	3 0 6	40 40 60
63 64 65	L	78 81 42	5,850 4,455 1,680	1,320 1,170 405 210	15,736 7,020 4,860 1,890	117.0 81.0 31.5	1,891.5 996.3 497.7	5:00 AM to 12:00 AM 5:00 AM to 10:00 PM 5:00 AM to 8:00 PM	2 3 2	9 6 3	6 4 2	9 6 3	6 4 2	0 0	40 40 40
66 131 132	CC CC	50 24 24	1,250 300 300	250 60 60	1,500 360 360	25.0 6.0 6.0 14.5	669.8 67.2 70.8 200.1	4:30 AM to 10:00 PM 6:00 AM to 6:35 PM 6:20 AM to 6:45 PM	0 0 1.0	0.5 0.5 1.0	0.5 0.5 1.0	0.5 0.5	0 0 0 0.5	0 0	40 30 30 30
133 134 231 232	00 00 00	58 58 60 46	725 1,595 750 575	145 145 150	970 1,740 900 690	29.0 15.0 11.5	455.3 270.0 154.1	5:30 AM to 10:00 PM 5:30 AM to 10:00 PM 5:00 AM to 1:00 AM 5:00 AM to 8:00 PM	2.0 1.0 1.0	2.0 1.0 1.0	2.0 0.5 0.5	2.0 1.0	1.0 0.5 0.5	0.0 0.5 0.0	30 35 35
232 301 302 303	CC CC	57 47 108	2,387 1,175 1,350	285 235 270	2,672 1,410 1,620	44.5 23.5 27.0	590.1 164.5 194.4	5:00 AM to 8:00 PM 4:30 AM to 10:11 PM 4:30 AM to 12:00 AM	3 1 1	3 2 2	3 1 1	3 2 2	1 2	0 0 1	35 40 40
304 305 401 402	60 60 60	47 99 48 48	1,282 2,485 612	235 490 108	1,517 2,975 720	25.3 49.6 12.0	365.0 577.7 215.3 170.4	5:00 AM to 11:00 PM 5:00 AM to 11:00 PM 3:50 AM to 9:34 PM 4:20 AM to 9:58 PM	1 4 0.5 0.5	2 4 1.0 1.0	1 2 0.5 0.5	2 4 1.0 1.0	1 2 0.5 0.5	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	30 40 35 35
403 411 412	00 00	48 49 100 84	548 1,284 1,408 756	172 157 116 504	720 1,441 1,524 1,260	12.0 24.0 25.4 21.0	424.8 357.3 230.2	4:20 AM to 9:58 PM 4:15 AM to 10:22 PM 4:30 AM to 12:49 AM 4:30 AM to 6:48 PM	1 1	2 2 2	1 1	2 2 2	1 1	1.0	35 35 40 35
413 414 415	CA CA	59 29 90	699 349 2,475	186 502 225	885 851 2 700	14.8 14.2 45.0	273.2 106.6 702.0	5:30 AM to 5:55 PM 4:30 AM to 6:43 PM 5:30 AM to 11:00 PM	1 1 2	1 4	1.0 1 2	1 4	1 2	0	40 Handi-Van Vehii 40
416 417 418 419	00 00 00	98 100 92 92	1,100 1,250 2,530 1,150	225 220 250 230 230	1,320 1,500 2,760 1,380	22.0 25.0 46.0 23.0	228.8 380.0 449.9 326.6	5:30 AM to 10:00 PM 5:00 AM to 12:30 AM 5:00 AM to 11:00 PM 5:00 AM to 11:00 PM	1 2	2 4 2	1.0	2 4 2	1 1 2	0 1 0	40 40 40 40
421 422 432	CC CC	71 130 147	3,905 3,575 1,837	325 370	4,260	71.0 65.0 36.8 37.2	949.3 1,051.7 391.0	4:33 AM to 12:03 AM 5:00 AM to 12:30 AM 4:41 AM to 1:28 AM	2 2 2	8 6 2	2 2 2	8 6 2	2 2 2	0 2 1	40 40 40 40
433 434 435	00 00	91 140 62	2,024 2,619 1,550	209 176 310	2,207 2,233 2,795 1,860	46.6 31.0	448.0 618.2 403.0	5:00 AM to 11:26 PM 4:41 AM to 12:52 AM 6:30 AM to 10:00 PM	1 2 0	4 4 2	2 2	4 2	2 2	1 1 0	40 40 40
440 441 501 502	CC CC CC	90 90 64 64	1,125 2,475 800 800	225 225 160 160	1,350 2,700 960 960	22.5 45.0 16.0 16.0	252.0 504.0 252.8 208.0	5:00 AM to 10:00 PM 5:00 AM to 10:00 PM 5:30 AM to 10:00 PM 5:30 AM to 10:00 PM	2 0 0	4 1	2 1	4 1	2 1	0 0	40 40 40 35
503 504 505	CA CC CC	34 36 36 100	722 990 270 1,250	177 90 90	899 1,080 360 1,500	15.0 18.0 6.0	148.4 201.6 73.8	4:33 AM to 7:53 PM 5:30 AM to 10:00 PM 5:30 AM to 10:00 PM	0.00 0.00	1 1.50 0.50	0.75 0.25	1 1.50 0.50	0.75 0.25	0 0.00 0.00	Handi-Van Vehil 35 35
511 512 513 521	CC CC CC	100 72 68 42	1,250 900 850	250 180 170 105	1,500 1,080 1,020 630	25.0 18.0 17.0 10.5	310.0 216.0 151.3 191.3	4:30 AM to 11:30 PM 5:00 AM to 11:00 PM 5:00 AM to 1:00 AM 5:00 AM to 8:00 PM	1 1 1 0.5	1 1 1.0	1 1 0.5	1 1 1.0	1 1 1 0.5	1 0 1 0.0	40 40 40
522 523 541	CC CC	42 34 98	525 850 2,450	105 170 490	1,020 2,940	10.5 17.0 49.0	302.4 292.4 661.5	5:00 AM to 8:00 PM 5:00 AM to 9:00 PM 5:30 AM to 10:00 PM	0.5 1.0 2.0	1.0 1.0 4.0	0.5 1.0 2.0	1.0 1.0 4.0	0.5 1.0 2.0	0.0	35 35 35 35
542 543 544	CC CC	72 94 64	900 1,175 800	180 235 160	1,080 1,410 960	18.0 23.5 16.0	262.1 244.4 201.0	5:30 AM to 10:00 PM 5:30 AM to 9:00 PM 5:30 AM to 9:00 PM	2.0 2.0 1.0	1.0 2.0 1.0	1.0 1.0 1.0	1.0 2.0 1.0	1.0 1.0 1.0	0.0 0.0	35 35 Handi-Van Vehi
545 546 547 548	00 00 00	70 62 115 116	875 775 2,300 2,320	175 155 285 290	1,050 930 2,585 2,610	17.5 15.5 43.1 43.5	245.0 235.9 736.5 461.7	5:30 AM to 9:00 PM 5:30 AM to 9:00 PM 4:30 AM to 12:30 AM 4:30 AM to 12:30 AM	2.0 1.0 3.0 3.0	1.0 1.0 3.0 3.0	1.0 1.0 1.5 1.5	1.0 1.0 3.0 3.0	1.0 1.0 1.5 1.5	0.0 0.0 1.5 1.5	35 35 40 40
549 611 612	CC CC	76 48 48	1,250 960 960	250 120 120	1,500 1,080 1,080	25.0 18.0 18.0	360.0 568.8 312.0	6:30 AM to 10:00 PM 5:00 AM to 10:00 PM 5:00 AM to 10:00 PM	2.0 1.5 1.5	2.0 1.5 1.5	1.0 0.8 0.8	2.0 1.5 1.5	1.0 0.8 0.8	1.0 0.0	40 35 35
613 614 615 RRY ROUTES	CA CA CC	34 34 34	425 425 850	85 85 170	510 510 1,020	8.5 8.5 17.0	95.2 227.8	5:00 AM to 9:30 PM 5:00 AM to 9:00 PM 5:00 AM to 9:00 PM	0.5 0.5 1.0	0.5 0.5 1.0	0.5 0.5 1.0	0.5 0.5 1.0	0.5 0.5 1.0	0.0 0.0 0.0	Handi-Van Vehi Handi-Van Vehi 35
4F 8F 30F	F F	32 32 32	1,045 1,330 760	95 95 95	1,140 1,425 855	19.0 23.8 14.3	174.8 235.6 136.8	Peak Period Peak Period Peak Period	0 0	4 5 3	0 0	4 5 3	4 5 3	0 0	40 40 40
41F 93F 411F	F F F	32 12 12 12	440 1,200 550	40 0 50	480 1,200 600	8.0 20.0 10.0	96.8 323.0 136.0	Peak Period Peak Period	0 0	4 4 3	0 0	4 4 3	2 2	0 0	40 40 35
413F PRESS ROUTES 80 80A	X	11 11 9	618 639	0	618 639	10.3	78.1 203.7 166.1	Peak Period Peak Period Peak Period	0 0	4 3	0	4 3	0 0	0	40 40 40
80B 81 82	X	2 22 7	79 1,288 354	0	79 1,288 354	1.3 21.5 5.9	22.3 452.4 109.8	Peak Period Peak Period Peak Period	0 0 1	6 3	0	6 3	0	0	40 60 40
83 83A 84 84A	X	17 4 8	1,366 253 583	0 0 0	1,366 253 583 583	22.8 4.2 9.7 9.7	489.3 106.2 219.6	Peak Period Peak Period Peak Period Peak Period	0 0 0	6 2 4 4	0	6 2 4 4	0 0 0	0 0 0	60 40 60 40
85 85A 86	X X X	8 6 2	583 613 309 128	0 0	613 309 128	10.2 5.2 2.1	206.6 181.3 95.0 51.8	Peak Period Peak Period Peak Period	0	6 3	0 0	5 2	0	0	40 40 40 40
86A 88 88A	X	2 4	136 194 702	0	136 194 702	2.3 3.2 11.7	56.7 64.7 301.9	Peak Period Peak Period Peak Period	0 0	2 2	0 0	1 3 2	0 0	0 0	40 40 40
90 92 93	X X X	4 4 6 33	216 210 462 2,652	0 0 0	216 210 462 2,652	3.6 3.5 7.7 44.2	71.8 63.8 153.6 1,133.6	Peak Period Peak Period Peak Period Peak Period	0 0	1 2 2 11	0 0	2 2 3 11	0 0	0 0	40 40 40 60
93A 95 96	X X X	2 2 8	152 169 364	0 0	152 169 364	2.5 2.8 6.1	74.2 62.0 140.6	Peak Period Peak Period Peak Period	0 0	1 1 4	0 0	1 1 4	0	0 0	40 40 40
97 98 101	X X X	12 12 10	570 644 550	0	570 644 550 390	9.5 10.7 9.2 6.5	230.4 274.0 221.4	Peak Period Peak Period Peak Period	2 2	5 4 3	0 0	5 6 5	0	0 0	40 60 60
102 103 203 434X	X X X	6 8 4 8	390 412 232 416	0 0 0	232	6.5 6.9 3.9 6.9	150.5 133.4 40.4 169.6	Peak Period Peak Period Peak Period Peak Period	0 0 0	2 4 2 4	0 0	3 4 2 4	0 0	0 0	40 40 40 40
440X 441X 100X	X	8 8 67	372 352 4,345	0 0 335	372 352	6.2 5.9 78.0	152.8 134.4 1,474.0	Peak Period Peak Period 4:30 AM to 7:00 PM	0 0	4 4 4 18	0 0 2	4 4 18	0 0 7	0 0	40 60 60
101X 102X 200X	X	34 34 56	2,550 2,550 3,080	240 240 280	4,680 2,790 2,790 3,360	46.5 46.5 56.0	839.8 853.4 1,086.4	4:40 AM to 7:00 PM 4:40 AM to 7:00 PM 4:30 AM to 7:00 PM	3 3 6	9 9 18	3 3 2	9 9 18	3 6	0 0	60 60 60
201X 202X 300X 301X	X X X	34 34 56 34	2,550 2,550 2,540 3,080	170 170 280 170	2,720 2,720 2,820	45.3 45.3 47.0 54.2		4:40 AM to 7:00 PM 4:40 AM to 7:00 PM 4:30 AM to 7:00 PM 4:40 AM to 7:00 PM	3 3 6 3	9 9 15 10	3 3 2 4	9 9 15	3 3 6	0 0	60 60 60
302X TOTALS	X	34 8,797	3,080	170	3,250 3,250 455,600	54.2 7,593.3	625.6 103,861.8	4:40 AM to 7:00 PM	3 271.00	10	4 365.00	10	359.00	98.00	60

# Bus Operating Plan – Alternative #4, Fixed Guideway Alternative, Full-Corridor Alignment Kalaeloa – Salt Lake – North King – Hotel

ROUTE				WEEK	DAY OPER	ATIONS				Maximum	WEEKDA	AY OPERA	TIONS		
Number			Running		C 2(	No anno a	Total			5:30 AM	9:00 AM	3:00 PM		11:00 PM	
Number	Function	Weekday Trips	Time (Minutes)	Layover (minutes)	(minutes)	Total Time Hours	Weekday Mileage	Span of Service	4:00 AM to 5:29 AM	to 8:59 AM	to 2:59 PM	to 5:59 PM	to 10:59 PM	to 3:59 AM	Vehicle Size
D	LS	125 96	7,194 2,396	756 484	7,950 2,880	132.5 48.0	2,500.1 1,030.6	3:07 AM to 10:53 PM 5:00 AM to 10:00 PM	10	10	6 2	10	6	0	60 60
1 1L	LS	191 146	6,401 5,762	1,119	7,520 6,395	125.3 106.6	1,117.4	4:00 AM to 2:00 AM 4:00 AM to 1:30 AM	8 4	8	5 4	8	8	4	60
2	L	208 214	5,692 9,208	918 752	6,610 9,960	110.2 166.0	998.5	4:10 AM to 1:44 AM 4:15 AM to 1:26 AM	7 6	7 9	4 9	7 9	6	4	40 60
4	L	121	6,310	950	7,260	121.0	996.9	5:00 AM to 12:00 AM	5	8	6	8	8	4	40
6	CC	55 95	1,207 5,384	174 437	1,381 5,821	23.0 97.0	229.0 857.1	5:36 AM to 10:02 PM 5:03 AM to 11:58 PM	0	10	7	10	3	0	40 40
9	L	98 268	1,896	324 737	2,220	37.0 182.9	351.2 1.764.8	5:00 AM to 10:20 PM 5:00 AM to 1:00 AM	2	3 14	2	3 14	2 8	0 4	40 60
14 15	CC	178 48	2,288 1,519	382 165	2,670 1,684	44.5 28.1	431.3 252.8	5:00 AM to 1:00 AM 5:30 AM to 10:23 PM	3 0	3	3	3	2	1 0	40 30
17 18	CC	146 124	7,066 5,220	914 750	7,980 5,970	133.0 99.5	1,256.3	5:00 AM to 12:00 AM 6:00 AM to 12:00 AM	4 0	10	6	10	8 3	4 3	40 40
19	L	126	7,889	681	8,570	142.8	1,432.0	4:13 AM to 1:48 AM	6	8	7	8	7	4	60
23 30	L	64 96	5,100 4,800	660 960	5,760 5,760	96.0 96.0	733.0	6:00 AM to 10:00 PM 5:00 AM to 12:00 AM	0 2	6	6	6	6	0 2	40 40
31 40	CC	170 256	3,240 18,492	600 2,888	3,840	64.0 356.3	628.9 5,026.0	4:45 AM to 12:25 AM 4:00 AM to 3:59 AM	5 21	5 25	17	5 25	17	5	40 60
41 42	L	98 116	5,978	1,372 580	7,350 4,140	122.5 69.0	1,497.4	4:47 AM to 10:10 PM 4:00 AM to 3:59 AM	5	10	5	10	5	5 6	40 60
50	Ĺ	103 134	3,441 5,360	415 670	3,856 6,030	64.3 100.5	922.6 1,563.9	5:00 AM to 11:00 PM 4:30 AM to 1:37 AM	3 5	5	3	5	3	0 2	40 60
52	L	75	7,875 4,830	1,125	9,000	150.0	2,808.8	4:00 AM to 3:59 AM	5	10	8	10	8	4	60
54 60	L	138 96	4,830 5,280	1,380 480	6,210 5,760	103.5 96.0	1,376.7 1,704.5	4:30 AM to 1:00 AM 5:00 AM to 12:00 AM	5 2	8	5 4	8	6	2	60 40
61 62	L	76 88	3,800 14,416	760 1,320	4,560 15,736	76.0 262.3	1,094.4 4,885.3	5:00 AM to 11:00 PM 4:00 AM to 3:59 AM	2 4	6 18	12	6 18	12	0	40 60
63 64	L	78 81	5,388 4,455	992 405	6,380	106.3		5:00 AM to 12:00 AM 5:00 AM to 10:00 PM	2 3	7	6 4	7 6	6 4	2	40 40
65	L	42	1,680	210	1,890	31.5	497.7	5:00 AM to 8:00 PM	2	3	1.5	3	1.5	0	40
66 131	CC	50 24	1,250 300	250 60	1,500 360	25.0 6.0	669.8 67.2	4:30 AM to 10:00 PM 6:00 AM to 6:35 PM	2 0	0.5	0.5	0.5	0	0	40 30
132 133	CC	24 60	300 1,650	60 150	360 1,800	6.0 30.0	70.8 380.4	6.20 AM to 6:45 PM 5:30 AM to 10:00 PM	0	0.5	0.5	0.5	1	0	30 30
134 135	CC	60 60	2,230 1,650	90	2,320 1,800	38.7	411.9 319.5	5:30 AM to 10:00 PM 5:30 AM to 10:00 PM	0	3 2	3	3 2	2	0	30 30
231	CC	60 54	750	150	900	15.0	270.0	5:00 AM to 1:00 AM	1	1	0.5	1	0.5	0.5	35 35
232 301	CC	88	675 3,036	135 484	810 3,520	13.5 58.7	204.4 563.6	5:00 AM to 8:00 PM 5:10 AM to 9:50 PM	3	6	0.5	6	0.5	0.5	35
302 303	CC	60 108	720 1,350 2,125	180 270	900 1,620	15.0 27.0	145.8 194.4	4:30 AM to 10:11 PM 4:30 AM to 12:00 AM	1	1 2	1	1 2	1 2	0	40 40
304 305	CC	85 64	2,125 1,600	425 320	2,550 1,920	42.5 32.0	457.0 349.1	5:00 AM to 11:00 PM 5:00 AM to 11:00 PM	1 2	4 2	2	4	1 2	0	30 40
306 311	CC	32 91	4.060	75 455	480 4,515	8.0 75.3	75.4 601.4	5:00 AM to 9:00 PM 5:00 AM to 8:00 PM	1 3	1 7	1 3	1 7	1 3	0	40 35
312	CC	86	914	121	1,035	17.3	269.6	5:30 AM to 8:00 PM	0	2	1	2	1	0	40
313 314	CC	106 120	2,809 2,400	371 300	3,180 2,700	53.0 45.0		5:30 AM to 1:20 AM 6:30 AM to 10:00 PM	0	3	3	4	2	0	40 35
401 402	CC	48 48	612 548	108	720 720	12.0 12.0	215.3 170.4	3:50 AM to 9:34 PM 4:20 AM to 9:58 PM	0.5 0.5	1	0.5	1 1	0.5	0	35 35
403 411	CC	61 100	1,981	222 116	2,203 1,524	36.7 25.4	572.3 357.3	4:15 AM to 10:22 PM 4:30 AM to 12:49 AM	2	4 2	1	4 2	1	0.5	35 40
412	CC	84	756	504	1,260	21.0	299.5	4:30 AM to 6:48 PM	1	2	1	2	1	0	30
413 414	CC CA	59 29	699 349	186 502	885 851	14.8 14.2	85.6	5:30 AM to 5:55 PM 4:30 AM to 6:43 PM	1 1	1	1	2	1	0	40 Handi-Van Vehicl
415 416	CC	90 88	3,792 1,100	513 220	4,305 1,320	71.8 22.0	965.7 228.8	5:30 AM to 11:00 PM 5:30 AM to 10:00 PM	3	7 2	3	7 2	3	0	40 40
417 418	CC	100 92	1,250 2,530	250 230	1,500 2,760	25.0 46.0	537.5 449.9	5:00 AM to 12:30 AM 5:00 AM to 11:00 PM	1 2	2	1	2 4	1 2	1 0	40 40
419 421	CC	92 Included with Route 41	1,150	230	1,380	23.0	326.6	5:00 AM to 11:00 PM	1 Included with Route 41	2	1	2	1	0	40
422	CC	130	3,575	325	3,900	65.0	1,051.7	5:00 AM to 12:30 AM	2	6	2	6	2	2	40
432 433	CC	147 91	1,837 2,024	370 209	2,207 2,233	36.8 37.2	391.0 448.0	4:41 AM to 1:28 AM 5:00 AM to 11:26 PM	2	4	2	2	1	0.5	40 40
434 435	CC	140 62	2,619 947	176 148	2,795 1,095	46.6 18.3	618.2 236.2	4:41 AM to 12:52 AM 6:30 AM to 10:00 PM	2 0	2	1	2	1	1 0	40 40
440 441	CC	90 90	1,125 1,125	225 225	1,350 1,350	22.5 22.5	346.6 504.0	5:00 AM to 10:00 PM 5:00 AM to 10:00 PM	2	2	1	2	1	0	40 40
501 502	CC	64 64	800 800	160 160	960 960	16.0 16.0	252.8 208.0	5:30 AM to 10:00 PM 5:30 AM to 10:00 PM	0	1	1	1	1 1	0	40 35
503 504	CA	34	722	177	899	15.0	148.4	4:33 AM to 7:53 PM	1	1	1	1	1	0	Handi-Van Vehic
505	CC	36 36	990 270	90 90	1,080 360	18.0 6.0	201.6 73.8	5:30 AM to 10:00 PM 5:30 AM to 10:00 PM	0	1.5 0.5	0.75 0.25	1.5 0.5	0.75 0.25	0	35 35
511 512	CC	100 96	1,250	250 240	1,500 1,440	25.0 24.0	310.0 352.3	4:30 AM to 11:30 PM 5:00 AM to 11:00 PM	1	2	1	2	1	0	40 40
513 521	CC	68 42	850 1,155	170 105	1,020 1,260	17.0 21.0	154.4 202.4	5:00 AM to 1:00 AM 5:00 AM to 8:00 PM	1	1 2	1	1 2	1	1 0	40 35
522 523	CC	42 34	1,155 850	105 170	1,260 1,020	21.0	393.5	5:00 AM to 8:00 PM 5:00 AM to 9:00 PM	1	2	1	2	1	0	35 35
541 542	CC	98 72	2,450	490 180	2,940	49.0	661.5	5:30 AM to 10:00 PM 5:30 AM to 10:00 PM	2	4	2	4	2	0	35 35
543	CC	94	1,175	235	1,410	23.5	244.4	5:30 AM to 9:00 PM	2 2	1 2	1	2	1	0	35
544 545	CA	64 70	800 875	160 175	960 1,050	16.0 17.5		5:30 AM to 9:00 PM 5:30 AM to 9:00 PM	1 2	1	1	1	1	0	Handi-Van Vehic 35
546 547	CC	62 115	775 2,600	155 575	930 3,175	15.5 52.9	235.9 736.5	5:30 AM to 9:00 PM 4:30 AM to 12:30 AM	1 4	1 4	1 2	1 4	1 3	0 2	35 40
548 611	CC	116 48	6,380	580 120	6,960	116.0 18.0		4:30 AM to 12:30 AM 5:00 AM to 10:00 PM	8	8	0.75	8	0.75	4	40 35
612	CC	48	960	120	1,080	18.0	312.0	5:00 AM to 10:00 PM	1.5 1.5	1.5	0.75	1.5	0.75	0	35
613 614	CA CA	34 34	425 425	85 85	510	8.5 8.5		5:00 AM to 9:30 PM 5:00 AM to 9:00 PM	0.5 0.5	0.5	0.5	0.5	0.5	0	Handi-Van Vehic Handi-Van Vehic
615 ERRY ROUTES	CC	34	850	170	1,020	17.0	227.8	5:00 AM to 9:00 PM	1	1	1	1	1	0	35
4F 8F	F	32 32	1,045 1,330	95 95	1,140 1,425	19.0 23.8	174.8 235.6	Peak Period Peak Period	0	5	0	5	4 5	0	40 40
30F 41F	F	32 12	760 440	95 40	855 480	14.3		Peak Period Peak Period	0	3	0	3 4	3 4	0	40 40
93F	F	12	1,200	0	1,200	20.0	323.0	Peak Period	0	4	0	4	2	0	40
411F 413F	F	12 12	550 330	50 0		10.0 5.5	136.0 78.1	Peak Period Peak Period	0	3	0	3	1	0	30 40
XPRESS ROUTES 80	X	11	618	0		10.3	203.7	Peak Period	0	4	0	1	0	0	40
82 83	X	7 14	354 670	0		5.9 11.2	109.8	Peak Period Peak Period	0 3	3	0	1 5	0	0	40 60
83A	X	4	80	0	80	1.3	39.6	Peak Period	2	0	0	2	0	0	40
84 84A	X	8	243 305	0	305	4.1 5.1	107.2 86.6	Peak Period Peak Period	1	2	0	2	0	0	60 40
	X	8	613 309	0	613 309	10.2 5.2 3.2	181.3 95.0	Peak Period Peak Period	0	6	0	5 2	0	0	40 40
85 85A		4	194	0	194		64.7	Peak Period	0	2	0	3	0	0	40
85A 88	X		702	n	702	11.7	301.9	Peak Period	0	2	0	2	0	0	40
85A	X X X	4 4 12	702 216 180	0	702 216 180	11.7 3.6 3.0	301.9 71.8 104.8	Peak Period Peak Period Peak Period	0 0	1 2	0 0	2 2 2	0 0	0 0	40 40 40

#### Bus Operating Plan - Alternative #4, Fixed Guideway Alternative, Full Corridor Alignment Kamokila - Airport - Dillingham - King with a Waikīkī Branch

ROUTE				WEEK	DAY OPER eekday To	tals				faximum '	WEEKDA Vehicles F	Required			
Number	Function	Minchiga Trino	Running Time	Layover		Total Time	Total Weekday	Coop of Consiso	4:00 AM to 5:00 AM	5:30 AM to 8:59	9:00 AM to 2:59	3:00 PM to 5:59	6:00 PM to 10:59	11:00 PM to 3:59	Mobiele Circ
A	LS LS	Weekday Trips	(Minutes) 5,015	(minutes) 700	(minutes) 5,715	Hours 95.3	Mileage 1,090.8	Span of Service 4:15 AM to 10:37 PM	4:00 AM to 5:29 AM	AM 3	PM 5	PM 7	PM 5	AM 0	Vehicle Size
C D	LS LS	125 96	4,880 2,396	745 484	5,625 2,880	93.8 48.0	1,030.6	3:07 AM to 10:53 PM 5:00 AM to 10:00 PM	7 3	7	5 2	4	5	0	60 60
1 1L	L	191 146	6,401 5,762	1,239	7,640 6,395	127.3 106.6	1,147.9	4:00 AM to 2:00 AM 4:00 AM to 1:30 AM	8 4	8	5 4	8	8	4	60 60
2	L	208 214	5,692 9.208	918 752	6,610 9,960	110.2 166.0	998.5	4:10 AM to 1:44 AM 4:15 AM to 1:26 AM	7 6	7	4	7	6	4	40 60
4	L CC	121 55	6,310 1,207	950 174	7,260 1,381	121.0 23.0	996.9 229.0	5:00 AM to 12:00 AM 5:36 AM to 10:02 PM	5 0	8	6	8	8	4	40 40
6	L	95 98	5,384	437	5,821	97.0		5:03 AM to 11:58 PM	1	10	7	10	3	0	40
13	Ĺ	192	1,896 7,232	324 570	2,220 7,802	37.0 130.0	1,264.3	5:00 AM to 10:20 PM 5:00 AM to 1:00 AM	6	3 7	7	3 7	5	4	40 60
14 15	00 00 00	178 48	3,922 1,519	538 165	4,460 1,684	74.3 28.1	252.8	5:00 AM to 1:00 AM 5:30 AM to 10:23 PM	5 0	5	5	5	3	0	40 30
17 18	OC OC	146 124	7,066 5,220	914 750	7,980 5,970	133.0 99.5		5:00 AM to 12:00 AM 6:00 AM to 12:00 AM	4 0	10 7	6	10 7	8	3	40 40
19 23	L L	126 64	7,889 5,100	681 660	8,570 5,760	142.8 96.0	1,432.0 1,412.2	4:13 AM to 1:48 AM 6:00 AM to 10:00 PM	6	8	7 6	8	7 6	<u>4</u> 0	60 40
30 31	L CC	96 170	4,800 3,240	960 600	5,760 3,840	96.0 64.0	733.0 542.5	5:00 AM to 12:00 AM 4:45 AM to 12:25 AM	2 5	8 5	4 2	8 5	4 2	2	40 40
40 41	L	256 98	18,492 5,978	2,888 1,372	21,380 7,350	356.3 122.5	5,026.0	4:00 AM to 3:59 AM 4:47 AM to 10:10 PM	21 5	25 10	17 5	25 10	17	5 5	60 40
42 50	Ė	116	3,560	580	4,140	69.0	824.2	4:00 AM to 3:59 AM	5	- 5	2	5	5	6	60
51	Ĺ	77 134	2,570 5,360	311 670	2,881 6,030	48.0 100.5	1,563.9	5:00 AM to 11:00 PM 4:30 AM to 1:37 AM	3 5	3 6	3 6	6	3	2	40 60
52 54	L	138	7,875 4,830	1,125 1,380	9,000 6,210	150.0 103.5	1,376.7	4:00 AM to 3:59 AM 4:30 AM to 1:00 AM	5	10 6	5	10 6	6	4	60 60
60	L	96 76	5,280 3,800	480 760	5,760 4,560	96.0 76.0	1,704.5	5:00 AM to 12:00 AM 5:00 AM to 11:00 PM	2 2	8	4	8	4	0	40 40
62 63	Ē	88 78	14,416	1,320	15,736 6,380	262.3 106.3	4,885.3	4:00 AM to 3:59 AM 5:00 AM to 12:00 AM	4 2	18	12	18	12	6	60 40
64	Ļ	81	4,455	405	4,860	81.0	966.7	5:00 AM to 10:00 PM	3	4	4	4	4	0	40
65 66	Ĺ	42 50	1,050 1,250	210 250	1,260 1,500	21.0 25.0	695.5	5:00 AM to 8:00 PM 4:30 AM to 10:00 PM	2 2	2	1	2	1	0	40 40
131 132	CC	24 24	300 300	60 60	360 360	6.0	70.8	6:00 AM to 6:35 PM 6:20 AM to 6:45 PM	0	0.5 0.5	0.5	0.5 0.5	0	0	30 30
133 134	CC	60 60	1,650	150 90	1,800 2,320	30.0 38.7	380.4 411.9	5:30 AM to 10:00 PM 5:30 AM to 10:00 PM	0	2 3	2	2	1.5	0	30 30
135	CC	60	2,230 750 1,530	150	900	15.0	144.0	5:30 AM to 10:00 PM	0 2	1 2	1	1 2	0.5	0	30
231 232	CC	60 54	1,530 675	150 135	1,680 810	28.0 13.5	204.4	5:00 AM to 1:00 AM 5:00 AM to 8:00 PM	1	1	1	1	1	0.5	35 35
301 302	CC CC	88 60	3,036 720	484 180	3,520 900	58.7 15.0		5:10 AM to 9:50 PM 4:30 AM to 10:11 PM	3	6	1	6	3	0	35 40
303 304	OC OC	108 85	1,350 2,125	270 425	1,620 2,550	27.0 42.5		4:30 AM to 12:00 AM 5:00 AM to 11:00 PM	1	2 4	1 2	2	2	1 0	40 30
305 306	CC	64 32	1,600	320 75	1,920	32.0 8.0	349.1 75.4	5:00 AM to 11:00 PM 5:00 AM to 9:00 PM	2	2	2	2	2	0	40 40
311	CC	91	4,060	455	4,515	75.3	601.4	5:00 AM to 8:00 PM	3	7	3	7	3	0	35
312 313	CC	86 106	914 2,809	121 371	1,035 3,180	17.3 53.0	687.4	5:30 AM to 8:00 PM 5:30 AM to 1:20 AM	0	4	2	4	2	2	40 40
314 401	CC	120 48	2,400 612	300 108	2,700 720	45.0 12.0		6:30 AM to 10:00 PM 3:50 AM to 9:34 PM	1 0.5	3	0.5	3	0.5	0	35 35
402 403	CC	48 61	548 1,981	172 222	720 2,203	12.0 36.7	170.4	4:20 AM to 9:58 PM 4:15 AM to 10:22 PM	0.5	1 4	0.5	1 4	0.5	0	35 35
411	CC	100	1,408	116	1,524	25.4	357.3	4:30 AM to 12:49 AM	1	2	1	2	1	0.5	40
412 413	CC	84 59	756 699	504 186	1,260 885	21.0 14.8	200.6	4:30 AM to 6:48 PM 5:30 AM to 5:55 PM	1	2	1	2	0	0	30 40
414 415	CA CC	29 90	349 3,792	502 513	851 4,305	14.2 71.8		4:30 AM to 6:43 PM 5:30 AM to 11:00 PM	1 3	7	3	7	3	0	Handi-Van Ve
416 417	CC	88 100	1,100 1,250	220 250	1,320 1,500	22.0 25.0	228.8	5:30 AM to 10:00 PM 5:00 AM to 12:30 AM	1	2 2	1	2 2	1	0	40 40
418 419	CC	92 92	2,530 1,150	230 230	2,760 1,380	46.0 23.0	449.9	5:00 AM to 11:00 PM 5:00 AM to 11:00 PM	2	4	1	4 2	2	0	40 40
421	CC	Included with Route 41							Included with Route 41	-				0	
422 432	CC	130 147	3,575 1,837	325 370	3,900 2,207	65.0 36.8	391.0	5:00 AM to 12:30 AM 4:41 AM to 1:28 AM	2	6	2	6	2	1	40 40
433	CC	91 140	2,024	209 176	2,233	37.2 46.6		5:00 AM to 11:26 PM 4:41 AM to 12:52 AM	1 2	4	2	4	1 2	0.5	40 40
435 440	CC	62 90	947 1,125	148 225	1,095	18.3		6:30 AM to 10:00 PM 5:00 AM to 10:00 PM	0 2	2	1	2	1	0	40 40
441 501	CC CC	90 90	1,125 1,125	225 225	1,350 1,350 1,350	22.5 22.5 22.5	504.0 355.5	5:00 AM to 10:00 PM 5:30 AM to 10:00 PM	2 0	2 2	1	2	1	0	40 40
502	CC	64	800	160	960	16.0	208.0	5:30 AM to 10:00 PM	0	1	- 1	1	1	0	35
503 504	CA CC	34 36	722 990	177 90	899 1,080	15.0 18.0	201.6	4:33 AM to 7:53 PM 5:30 AM to 10:00 PM	1 0	1.5	0.75	1.5	0.75	0	Handi-Van Ve 35
505 511	CC	36 100	270 1,250	90 250	360 1,500	6.0 25.0		5:30 AM to 10:00 PM 4:30 AM to 11:30 PM	0	0.5	0.25	0.5	0.25	0	35 40
512 513	CC	96 68	1,200 850	240 170	1,440 1,020	24.0 17.0	352.3	5:00 AM to 11:00 PM 5:00 AM to 1:00 AM	1	2	1	2	1	0	40 40
521	CC	42	1,155	105	1,260	21.0	202.4	5:00 AM to 8:00 PM	1	2	1	2	1	0	35 35
522 523	CC	42 34	1,155 850	170	1,260	21.0 17.0	233.2	5:00 AM to 8:00 PM 5:00 AM to 9:00 PM	1	1	1	1	1	0	35
541 542	CC	98 72	2,450 900	490 180	2,940 1,080	49.0 18.0		5:30 AM to 10:00 PM 5:30 AM to 10:00 PM	2 2	1	1	4	1	0	35 35
543 544	CC CA	94 64	1,175 800	235 160	1,410 960	23.5 16.0	150.7	5:30 AM to 9:00 PM 5:30 AM to 9:00 PM	2	2	1	2	1	0	35 Handi-Van Ve
545 546	CC	70 62	875 775	175 155	1,050 930	17.5 15.5		5:30 AM to 9:00 PM 5:30 AM to 9:00 PM	2	1	1	1	1	0	35 35
547 548	CC	115 116	2,800	575 580	3,375 6,960	56.3 116.0	601.4	4:30 AM to 12:30 AM 4:30 AM to 12:30 AM	4 8	5	2 4	5 8	3 4	2	40 40
611	CC	48	960	120	1,080	18.0	568.8	5:00 AM to 10:00 PM	1.5	1.5	1	1.5	1	0	35
612 613	CC	48 34	960 425	120 85	1,080 510	18.0 8.5	88.4	5:00 AM to 10:00 PM 5:00 AM to 9:30 PM	1.5 0.5	1.5 0.5	0.5	1.5 0.5	0.5	0	35 Handi-Van Ve
614 615	CA CC	34 34	425 850	85 170	510 1,020	8.5 17.0		5:00 AM to 9:00 PM 5:00 AM to 9:00 PM	0.5 1	0.5	0.5	0.5	0.5	0	Handi-Van Ve
RY ROUTES 4F	I F I	32	1,045	95	1,140	19.0		Peak Period	0	4	0	4	4	0	40
8F 30F	F	32	1,330	95	1,425	23.8	235.6	Peak Period Peak Period	0	5	0	5	5	0	40
41F	F	32 12	760 440	95 40	855 480	14.3 8.0	96.8	Peak Period	0	3	0	3	3 4	0	40 40
93F 411F	F	12 12	1,200 550	0 50	1,200 600	20.0 10.0	136.0	Peak Period Peak Period	0	4	0	4 3	2	0	40 30
413F RESS ROUTES	F	12		0	330	5.5	78.1	Peak Period	1	1	0	11	1	0	40
80 82	X	11 7	618 354	0	618 354	10.3 5.9	203.7	Peak Period Peak Period	0	4 3	0	1	0	0	40 40
83	Х	14	670	0	670	11.2	227.7	Peak Period	3	4	0	5	0.	0	60
83 A 84	X	4 8	80 243	0	80 243	1.3 4.1	107.2	Peak Period Peak Period	2 2	2	0	2	0	0	40 60
84 A 85	X	8 8	305 613	0	305 613	5.1 10.2	86.6	Peak Period Peak Period	1 0	2	0	2 5	0	0	40 40
85 A	Х	6	309 194	0	309	5.2	95.0	Peak Period	0	3	0	2	0	0	40 40
88 88 A	X	4	702	0	194 702	11.7	301.9	Peak Period Peak Period	0	2	0	2	0	0	40
		4	216	0	216	3.6		Peak Period	0	1	0	2	0	0	40
89 98	X	12	180	0	180	3.0	104.8	Peak Period	1	2	0	2	0	0	40

#### Bus Operating Plan - Alternative #4, Fixed Guideway Alternative, Full Corridor Alignment Kalaeloa - Airport - Dillingham - Halekauwila

Number A C	Function		Running Time	Layover	eekday Tot	7	Total			5:30 AM	WEEKDAY OPERATIONS  'ehicles Required  9:00 AM   3:00 PM   6:00 PM   11:00 PM			1	
A C	and a local control					Total Time	Weekday			to 8:59	to 2:59	to 5:59	to 10:59	to 3:59	
С	LS	Weekday Trips 158	5,015	(minutes) 700	(minutes) 5,715	Hours 95.3	Mileage 1,090.8	Span of Service 4:15 AM to 10:37 PM	4:00 AM to 5:29 AM 5	AM 3	PM 5	PM 7	PM 5	AM 0	Vehicle Siz 60
D	LS LS	125 96	4,880 2,396	745 484	5,625 2,880	93.8 48.0		3:07 AM to 10:53 PM 5:00 AM to 10:00 PM	7 3	7 4	5 2	7 4	5	2	60 60
1	L LS	191 146	8,404 5,762	1,146 633	9,550 6,395	159.2 106.6	1,298.4	4:00 AM to 2:00 AM 4:00 AM to 1:30 AM	10 4	10	5	10	10	5 4	60 60
2	L	208	5,692	918	6,610	110.2 166.0	1,082.5	4 10 AM to 1.44 AM 4 15 AM to 1.26 AM	7	9	4 9	9	6	4	40 60
4	L	168	8,790	1,290	10,080	168.0	1,382.6	5:00 AM to 12:00 AM	6	12	6	12	12	4	40
6	CC L	55 95	1,207 5,384	174 437	1,381 5,821	23.0 97.0	857.1	5:36 AM to 10:02 PM 5:03 AM to 11:58 PM	0	10	7	10	3	0	40 40
9	L	98 276	1,896 10,515	324 771	2,220 11,286	37.0 188.1	1,817.5	5:00 AM to 10:20 PM 5:00 AM to 1:00 AM	2 6	3 14	2	3 14	2 8	0 4	40 60
14 15	CC CC	178 73	3,922 2,357	538 251	4,460 2,608	74.3 43.5	671.8 384.5	5:00 AM to 1:00 AM 5:30 AM to 10:23 PM 5:00 AM to 12:00 AM	5	5 5	5	5	3	2 0	40 30
17 18	CC	146 124	7,066 5,220	914 750	7,980 5,970	133.0 99.5	1,256.3 819.0	5:00 AM to 12:00 AM 6:00 AM to 12:00 AM	4 0	10 7	6	10 7	8	4	40 40
19 23	L	126 64	7,889 5,100	681 660	8,570 5,760	142.8 96.0	1,432.0	4:13 AM to 1:48 AM 6:00 AM to 10:00 PM	6 0	8	7 6	8	7 6	4 0	60 40
30 31	L CC	96 170	4,800 3,240	960 600	5,760 3,840	96.0 64.0		5:00 AM to 12:00 AM 4:45 AM to 12:25 AM	2	8	4	8	4	2	40 40
40 41	L	256 98	18,492 5,978	2,888 1,372	21,380 7,350	356.3 122.5	5,026.0	4:00 AM to 3:59 AM 4:47 AM to 10:10 PM	21 5	25 10	17	25 10	17 5	5	60 40
42 50	Ē	116 127	3,560 4,245	580 511	4,140 4,756	69.0 79.3	824.2	4:00 AM to 3:59 AM 5:00 AM to 11:00 PM	5 3	5	5 2 5	5	5	6	60 40
51	Ĺ	134	5,360 7,875	670	6,030	100.5	1,563.9	4:30 AM to 1:37 AM		6	6	6	3 8	2 4	60
54	L	138	4,830	1,125 1,380	6,210	103.5	1,376.7	4:00 AM to 3:59 AM 4:30 AM to 1:00 AM	5 5 5	10 6	8 5	10 6	6	3	60 60
60 61	L	96 76	5,280 3,800	480 760	5,760 4,560	96.0 76.0	1,260.7	5:00 AM to 12:00 AM 5:00 AM to 11:00 PM	2 2	8	4	8	4	0	40 40
62	L	88 78	14,416 5,388	1,320 992	15,736 6,380	262.3 106.3		4:00 AM to 3:59 AM 5:00 AM to 12:00 AM	4 2	18	12	18	12	6	60 40
64 65	L	81 42	4,455 1,050	405 210	4,860 1,260	81.0 21.0	966.7 442.3	5:00 AM to 10:00 PM 5:00 AM to 8:00 PM	3 2	4 2	4	4 2	4	0	40 40
66 131	CC	50 24	1,250	250 60	1,500 360	25.0 6.0	695.5	4:30 AM to 10:00 PM 6:00 AM to 6:35 PM	2 0	2 0.5	1 0.5	2 0.5	1 0	0	40 30
132	CC	24 24 60	300 1,650	60 150	360 1,800	6.0	70.8	6: 20 AM to 6:45 PM 5: 30 AM to 10:00 PM	0	0.5	0.5	0.5	0	0	30 30
134	CC	60	2,230	90	2,320	38.7	411.9	5:30 AM to 10:00 PM	0	3	3	3	1.5	0	30
135 231	CC	60	750 1,530	150 150	900 1,680	15.0 28.0	293.7	5:30 AM to 10:00 PM 5:00 AM to 1:00 AM	2	1 2	1	2	0.5	0.5	30 35
232 301	CC	54 88	675 3,036	135 484	810 3,520	13.5 58.7	563.6	5:00 AM to 8:00 PM 5:10 AM to 9:50 PM	1 3	6	1 2	6	3	0.5	35 35
302 303	CC	60 108	720 1,350	180 270	900 1,620	15.0 27.0	145.8 194.4	4:30 AM to 10:11 PM 4:30 AM to 12:00 AM	1	1 2	1	1 2	1 2	0	40 40
304 305	CC CC	85 64	2,125 1,600	425 320	2,550 1,920	42.5 32.0		5:00 AM to 11:00 PM 5:00 AM to 11:00 PM	1 2	4 2	2	4	1 2	0	30 40
306 311	CC	32 91	405 4,060	75 455	480 4,515	8.0 75.3	75.4	5:00 AM to 11:00 PM 5:00 AM to 9:00 PM 5:00 AM to 8:00 PM	1 3	1 7	1 3	1 7	1 3	0	40 35
312 313	CC	86 106	914	121	1,035	17.3	269.6	5:30 AM to 8:00 PM 5:30 AM to 1:20 AM	0	2	1 2	2	1 2	0	40 40
314	CC	120	2,400	300	2,700	45.0	664.8	6:30 AM to 10:00 PM	1	3	3	3	2	0	35
401 402	CC	48 48	612 548	108 172	720 720	12.0 12.0	170.4	3:50 AM to 9:34 PM 4:20 AM to 9:58 PM	0.5 0.5	1	0.5 0.5	1	0.5	0	35 35
403	CC	61 100	1,981	222 116	2,203 1,524	36.7 25.4		4: 15 AM to 10:22 PM 4: 30 AM to 12:49 AM	2	2	1	2	1	0.5	35 40
412	CC	84 59	756 699	504 186	1,260 885	21.0 14.8	200.6	4:30 AM to 6:48 PM 5:30 AM to 5:55 PM	1	2	1	2	0	0	30 40
414 415	CA CC	29 90	349 3,792	502 513	851 4,305	14.2 71.8		4:30 AM to 6:43 PM 5:30 AM to 11:00 PM	1 3	1 7	1 3	1 7	1 3	0	Handi-Van Ve
416 417	CC	88 100	1,100	220 250	1,320 1,500	22.0 25.0	228.8	5:30 AM to 10:00 PM 5:00 AM to 12:30 AM	1	2	1	2	1	0	40 40
418 419	CC	92 92	2,530 1,150	230 230	2,760 1,380	46.0 23.0	449.9	5:00 AM to 11:00 PM 5:00 AM to 11:00 PM	2	4 2	2	4 2	2	0	40 40
421	CC I	ncluded with Route 41		250		50.0			Included with Route 41		2			2	
422 432	CC	100 147	2,750 1,837	370	3,000 2,207	36.8	391.0	5:00 AM to 12:30 AM 4:41 AM to 1:28 AM	2	4 2	2	2	2	1	40 40
433 434	CC	91 140	2,024 2,619	209 176	2,233 2,795	37.2 46.6	618.2	5:00 AM to 11:26 PM 4:41 AM to 12:52 AM	1 2	4	2	4	2	0.5	40 40
435 440	CC	62 90	947 1,125	148 225 225	1,095 1,350	18.3 22.5 22.5	346.6	6:30 AM to 10:00 PM 5:00 AM to 10:00 PM	0 2	2	1	2	1	0	40 40
441 501	CC	90	1,125	225 225	1,350 1,350	22.5 22.5	504.0 355.5	5:00 AM to 10:00 PM 5:30 AM to 10:00 PM	2 0	2	1	2	1	0	40 40
502 503	CC CA	64 34	800 722	160 177	960 899	16.0 15.0		5:30 AM to 10:00 PM 4:33 AM to 7:53 PM	0	1	1	1	1	0	35 Handi-Van Ve
504 505	CC	36 36	990 270	90 90	1,080 360	18.0	201.6	5:30 AM to 10:00 PM 5:30 AM to 10:00 PM	0	1.5 0.5	0.75 0.25	1.5 0.5	0.75 0.25	0	35 35
511	CC	100	1,250	250	1,500	25.0	310.0	4:30 AM to 11:30 PM	1	2 2	1 1	2	1	1	40
512 513	CC	68	1,200 850	240 170	1,440	24.0 17.0	154.4	5:00 AM to 11:00 PM 5:00 AM to 1:00 AM	1	1	1	1	1	1	40 40
521 522	CC	42	1,155	105 105	1,260	21.0	393.5	5:00 AM to 8:00 PM 5:00 AM to 8:00 PM	1	2	1	2	1	0	35 35
523 541	CC	34 98	850 2,450	170 490	1,020 2,940	17.0 49.0	681.6	5:00 AM to 9:00 PM 5:30 AM to 10:00 PM	1 2	1 4	1 2	1 4	2	0	35 35
542 543	CC	72 68	900 850	180 170	1,080 1,020	18.0 17.0	176.5	5:30 AM to 10:00 PM 5:30 AM to 9:00 PM	2	1	1	1	1	0	35 35
544 545	CA CC	64 70	800 875	160 175	960 1,050	16.0 17.5	255.5	5:30 AM to 9:00 PM 5:30 AM to 9:00 PM	1 2	1 1	1	1	1	0	Handi-Van V
546 547	CC	62 115	775 2,800	155 575	930	15.5 56.3	169.9	5:30 AM to 9:00 PM 4:30 AM to 12:30 AM	1 4	1 5	1 2	1 5	1 3	0	35 40
548 611	CC	116 48	6,380 960	580 120	6,960 1,080	116.0 18.0	1,105.5	4:30 AM to 12:30 AM 5:00 AM to 10:00 PM	8 1.5	8	4	8	4	4	40 40 35
612	CC	48	960	120	1,080	18.0	312.0	5:00 AM to 10:00 PM 5:00 AM to 10:00 PM 5:00 AM to 9:30 PM	1.5	1.5	1	1.5	1	0	35
613 614	CA CA	34 34	425 425	85 85	510 510	8.5 8.5	95.2	5:00 AM to 9:00 PM	0.5 0.5	0.5	0.5	0.5	0.5	0	Handi-Van Ve
615 / ROUTES	CC	34	850	170	1,020	17.0		5:00 AM to 9:00 PM	1	1	1	1	1	0	35
4F 8F	F	32 32	1,045 1,330	95 95	1,140 1,425	19.0 23.8	235.6	Peak Period Peak Period	0	4 5	0	4 5	4 5	0	40 40
30F 41F	F	32 12	760 440	95 40	855 480	14.3 8.0		Peak Period Peak Period	0	3 4	0	3 4	3 4	0	40 40
93F 411F	F	12	1,200	0 50	1,200	20.0	323.0	Peak Period Peak Period	0	4	0	4	2	0	40 30
413F	F	12		0	330	5.5		Peak Period	1	1	0	1	1	0	40
ESS ROUTES 80	Х	11	618	0	618	10.3		Peak Period	0	4	0	1	0	0	40
82 83	X	7	354 670	0	354 670	5.9 11.2	227.7	Peak Period Peak Period	0	3	0	1 5	0	0	40 60
83A	X	4 8	80 243	0	80 243	1.3 4.1	39.6	Peak Period Peak Period	2 2	0 2	0	2 2	0	0	40 60
84		8	305	0	305	5.1 10.2	86.6	Peak Period Peak Period	1 0	2	0	2	0	0	40 40
84 84A 85	X	8	613	0											
84 84A 85 85A	X	. 6	613 309 194	0	613 309 194	5.2	95.0	Peak Period	0	3	0	2	0	0	40
84 84A 85	Х		613 309 194 702 216		309 194 702 216		95.0 64.7 301.9	Peak Period Peak Period Peak Period Peak Period Peak Period							

# Bus Operating Plan - Alternative #4, Fixed Guideway Alternative, 20-mile Alignment East Kapolei to Ala Moana Center

ROI	UTE			V		PERATION	S				W	EEKDAY O	PERATION	S	
		W. A. 15 - 5 - 5	Running		12 (3)/64/	y Totals	Total		4:00 AM	5:30 AM	9:00 AM	3:00 PM	6:00 PM	11:00 PM	
Number	Function	Weekday Trips	Time (Minutes)	Layover (minutes)	Total Time (minutes)	Total Time Hours	Weekday Mileage	Span of Service	to 5:29 AM	to 8:59 AM	to 2:59 PM	to 5:59 PM	to 10:59 PM	to 3:59 AM	Vehicle Size
A B	LS LS	158 129	5,015 5,223	700 1,401	5,715 6,624	95.3 110.4	1,090.8	4:15 AM to 10:37 PM 4:55 AM to 11:02 PM	5	7	5 7	7	5 7	0	40 40
C D	LS LS	125 96	6,070 2,396	830 484	6,900 2,880	115.0 48.0	2,165.1 1,030.6	3:07 AM to 10:53 PM 5:00 AM to 10:00 PM	8	8	6	8	6	2	40 40
1 1L	L	191 146	4,205 9,059	575 801	4,780 9,860	79.7 164.3	766.0 2,163.0	4:00 AM to 2:00 AM 4:00 AM to 1:30 AM	5 10	5 12	4 7	5 12	5 7	3 7	40 60
2	L	206 218	11,001	1,249	12,250 7,630	204.2	1,889.0	4:10 AM to 1:44 AM 4:15 AM to 1:26 AM	13	13	8	13	11	7	60 40
4 5	L	147 70	7,740 1.840	1,080 266	8,820 2,106	147.0 35.1	1,278.7	5:00 AM to 12:00 AM 5:36 AM to 10:02 PM	5	12	6	12	8	4	60 40
6	Ĺ	255 465	7,618	1,307	8,925 14,040	148.8 234.0	1,305.5	5:03 AM to 11:58 PM 7:15 AM to 12:00 AM	6	10 17	8	10 17	10	6	40/60 40/60
9	Ĺ	98 216	12,690 2,356 4,749	1,350 574 651	2,930 5,400	48.8 90.0	455.4 814.3	5:00 AM to 10:20 PM 5:00 AM to 1:00 AM	2 5	4 5	2 5	4 5	2 5	0	60
15 17	CC	72 146	2,600 7,066	110	2,710 7,980	45.2	436.7 1.256.3	5:30 AM to 10:23 PM	0	4	2	4	2 8	0 4	30 40
18	CC	124	5,220	750	5,970	133.0 99.5	819.0	5:00 AM to 12:00 AM 6:00 AM to 12:00 AM	0	7	6	7	3	3 4	40
19 23	L	126 64	5,100	681 660	5,760	142.8 96.0		6:00 AM to 10:00 PM	0	6	6	6	6	0	40 40
30 31	CC	70 170	3,500 3,240	700 600	4,200 3,840	70.0 64.0	534.5 628.9	5:00 AM to 12:00 AM 4:45 AM to 12:25 AM	2 5	4 5	4 2	4 5	4 2	2	40 40
40 41	L L	256 98	18,492 4,361	2,888 294	21,380 4,655	356.3 77.6		4:00 AM to 3:59 AM 4:47 AM to 10:10 PM	21 3	25 6	17 3	25 6	17 3	5 3	60 40
42 50	L L	161 123	9,876 7,324	504 560	10,380 7,884	173.0 131.4	2,368.2 1,966.4	4:00 AM to 3:59 AM 5:00 AM to 11:00 PM	13	14	8	14	6	6	60 40
51 52	L	134 119	5,360 12,495	670 1,785	6,030 14,280	100.5 238.0	1,563.9 4,456.6	4:30 AM to 1:37 AM 4:00 AM to 3:59 AM	5	6 12	6 12	12	3 12	2	40 60
54 60	L L	138 96	4,830 5,280	1,380 480	6,210 5,760	103.5 96.0	1,376.7 1,704.5	4:30 AM to 1:00 AM 5:00 AM to 12:00 AM	5 2	6	5 4	6 8	6 4	3 2	40 40
61 62	L	76 88	5,280 3,800 14,416	760 1,320	4,560 15,736	76.0 262.3	1,092.3	5:00 AM to 11:00 PM	2 2 4	6	4 12	6	12	0	40 60
63 64	L	78 68	5,388	992	6,380	106.3	1,566.9	5:00 AM to 12:00 AM 5:00 AM to 10:00 PM	2	7	6	7	6	2	40 40
65	L	42 50	1,680 1,250	210 250	1,890 1,500	31.5 25.0	442.3 695.5	5:00 AM to 8:00 PM 4:30 AM to 10:00 PM	2	3	1.5	3	1.5	0	40 40 40
66 131	CC	24	300 300	60	360	6.0	67.2 70.8	6:00 AM to 6:35 PM	0	0.5 0.5	0.5	0.5	0	0	30 30
132	CC	24 60	750	60 150	360 900	6.0 15.0	207.0	6:20 AM to 6:45 PM 5:30 AM to 10:00 PM	0	1	1	1	1	0	30
134 231	CC	60 60	1,650 750	150 150	1,800	30.0 15.0	270.0	5:30 AM to 10:00 PM 5:00 AM to 1:00 AM	1	1	0.5	1	0.5	0.5	30 35
232 301	CC	54 88	675 3,036	135 484	810 3,520	13.5 58.7	204.4 563.6	5:00 AM to 8:00 PM 5:10 AM to 9:50 PM	3	1 6	0.5	6	0.5	0.5	35 35
302 303	CC	60 108	720 1,350	180 270	900 1,620	15.0 27.0	194.4	4:30 AM to 10:11 PM 4:30 AM to 12:00 AM	1	1 2	1	1 2	1 2	0	40 40
304 305	CC	85 64	2,125 1,600	425 320	2,550 1,920	42.5 32.0		5:00 AM to 11:00 PM 5:00 AM to 11:00 PM	1 2	4 2	2 2	4 2	1 2	0	30 40
306 311	CC	32 91	405 4,060	320 75 455	480 4,515	8.0 75.3	75.4 719.0	5:00 AM to 9:00 PM 5:00 AM to 8:00 PM	1 3	1 7	1 3	1 7	1 3	0	40 35
312 313	CC	86 106	774 1,484	86 106	860 1,590	14.3	169.0 392.7	5:30 AM to 8:00 PM 5:30 AM to 1:20 AM	0	2	1	2	1	0	40 40
314 401	CC	120	2,400	300 108	2,700	45.0 12.0		6:30 AM to 10:00 PM 3:50 AM to 9:34 PM	1 0.5	3	3 0.5	3	0.5	0	35 35
402	CC	48	548	172	720	12.0	170.4 535.8	4:20 AM to 9:58 PM	0.5	1 4	0.5	1 3	0.5	0	35 35 35
403	CC	61 94	1,981 3,384	222 376	2,203 3,760	36.7 62.7	825.8	4:15 AM to 10:22 PM 4:30 AM to 12:49 AM	3	6	3	6	3	3	40
412 413	CC	84 59	756 699	504 186	1,260 885	21.0 14.8	200.6	4:30 AM to 6:48 PM 5:30 AM to 5:55 PM	1	2	1	2	0	0	30 40
414 415	CA CC	29 90	349 4,200	502 600	851 4,800	14.2 80.0		4:30 AM to 6:43 PM 5:30 AM to 11:00 PM	1	8	3	1 8	3	0	Handi-Van Vehicle 40
416 417	CC CC	88 Included wit		220	2,640	44.0	526.2	5:30 AM to 10:00 PM	2 Included w	ith Route 4		4	2	0	40
418 419	CC	92 92	2,530 2,530	230 230	2,760 2,760	46.0 46.0	449.9 527.2	5:00 AM to 11:00 PM 5:00 AM to 11:00 PM	2	4	1 2	4	2 2	0	40 40
421 422	CC	Included wit	th Route 41 4,902	708	5,610	93.5	1,222.0	5:00 AM to 12:30 AM	Included w	ith Route 4°	3	9	3	2	40
432 433	CC	147 91	1,837 2,024	370 209	2,207 2,233	36.8 37.2	391.0 448.0	4:41 AM to 1:28 AM 5:00 AM to 11:26 PM	2	2	2	2	2	1	40 40
434 440	CC	140 90	2,619	176 225	2,795 1,350	46.6 22.5		4:41 AM to 12:52 AM 5:00 AM to 10:00 PM	2	4	2	4 2	2	1 0	40 40
441 501	CC	90 64	2,475	225 160	2,700	45.0 16.0		5:00 AM to 10:00 PM 5:30 AM to 10:00 PM	2 0	4	2	4	2	0	60 40
502	CC	64	800 722	160 177	960	16.0	208.0	5:30 AM to 10:00 PM 4:33 AM to 7:53 PM	0	1	1	1	1	0	35
503 504	CA CC	36	990	90	1,080	18.0	201.6	5:30 AM to 10:00 PM	0	1.5	0.75	1.5	0.75	0	Handi-Van Vehicle 35
505 511	CC	36 100	270 1,250	90 250	360 1,500	6.0 25.0		5:30 AM to 10:00 PM 4:30 AM to 11:30 PM	1	0.5	0.25	0.5	0.25	1	35 40
512 513	CC	96 68	1,200 850	240 170	1,440 1,020	24.0 17.0	352.3 154.4	5:00 AM to 11:00 PM 5:00 AM to 1:00 AM	1	1	1	1	1	1	40 40
521 522	CC	42 42	1,155 1,155	105 105	1,260 1,260	21.0 21.0	202.4 393.5	5:00 AM to 8:00 PM 5:00 AM to 8:00 PM	1	2	1	2	1	0	35 35
523 541	CC	34 98	850 2,450	170 490	1,020 2,940	17.0 49.0	292.4 681.6	5:00 AM to 9:00 PM 5:30 AM to 10:00 PM	1 2	1 4	1 2	1 4	1 2	0	35 35
542 543	CC	72 68	900 850	180 170	1,080	18.0 17.0	248.8 176.8	5:30 AM to 10:00 PM 5:30 AM to 9:00 PM	1	1	1	1	1	0	35 35
544 545	CA CC	64 70	800 875	160 175	960	16.0	150.7 255.5	5:30 AM to 9:00 PM 5:30 AM to 9:00 PM	1	1	1	1	1	0	Handi-Van Vehick
546 547	CC	62 115	775 2,600	155 575	930	15.5 52.9	169.9 601.4	5:30 AM to 9:00 PM 4:30 AM to 12:30 AM	1 4	1 4	1 2	1 4	1 3	0 2	35 40
548 611	CC	116	6,380 960	580 120	6,960	116.0 18.0	1,105.5	4:30 AM to 12:30 AM 5:00 AM to 10:00 PM	8 1.5	8 1.5	4 0.75	8 1.5	0.75	4	40 40 35
612	CC	48	960	120	1,080	18.0	312.0	5:00 AM to 10:00 PM	1.5	1.5	0.75	1.5	0.75	0	35
613 614	CA CA	34 34	425 425	85 85	510 510	8.5 8.5		5:00 AM to 9:30 PM 5:00 AM to 9:00 PM	0.5	0.5	0.5	0.5	0.5	0	Handi-Van Vehick Handi-Van Vehick
615 FERRY RO	CC OUTES	34	850	170	1,020	17.0		5:00 AM to 9:00 PM	1	1	1	1	1	0	35
4F 8F	F	32 32	1,045 1,330	95 95	1,140 1,425	19.0 23.8	235.6	Peak Period Peak Period	0	4 5	0	4 5	4 5	0	40 40
30F 41F	F	32 12	760 440	95 40	855 480	14.3 8.0	136.8 96.8	Peak Period Peak Period	0	3 4	0	3 4	3 4	0	40 40
93F 411F	F	12 12	1,200 550	0 50	1,200 600	20.0 10.0	323.0	Peak Period Peak Period	0	4 3	0	4 3	2 2	0	40 30
413F	F	12	330	0		5.5		Peak Period	1	1	0	1	1	0	40
80 80A	X	11	618 639	0	618 639	10.3	203.7 166.1	Peak Period Peak Period	0	4 3	0	5	0	0	40 40
80B	X	2	79	0	79	1.3	22.3	Peak Period	0	1	0	1	0	0	40
82 83	X	7 14	354 670	0	670	5.9 11.2	227.7	Peak Period Peak Period	3	3 4	0	5	0	0	40 60
83A 84	X	4 8	80 243	0		1.3 4.1		Peak Period Peak Period	2	2	0	2	0	0	40 40
84A 85	X	8	305 613	0	305 613	5.1 10.2		Peak Period Peak Period	1 0	2	0	2 5	0	0	40 40
85A 88	X	6	309 194	0	309 194	5.2		Peak Period	0	3 2	0	3	0	0	40 40
	Х	4 4	702 216	0	702	11.7	301.9	Peak Period Peak Period	0	2 2	0	2	0	0	40 40 40
88A							11.8								
88A 89 93 98	X X X	20	1,300	0		21.7		Peak Period Peak Period	6	4 2	0	9	0	0	60 60

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#### Fixed Guideway Operating Plan - Alternative #4, Fixed Guideway Alternative, Full-Corridor Alignment Kalaeloa – Salt Lake – North King – Hotel

Annualization weekday: Annualization Saturday: Annualization Sunday: Annualization holiday, federal: Annualization holiday, state:

246 52 52

capacity time distance 185 106.44 52.98

weekday

weekday

off-peak, 1-car

Capacity OK? Capacity Day Consist TPH Vehicles # hours Headway Description (pphpd) Miles weekday weekday 72 36 18 11 peak, 2-car off-peak, 2-car 20 10 7,400 3,700 10,751

1,800

10

Ц	Days	Vehicle Miles	Train Hours
7 [	246	2,644,819	44,280
11	246	2,380,337	39,852
7 [	246	396,723	13,284
	246	242,442	8,118

5,664,321

105,534

Hours

180

162

54 33

429

9,676

1,613 986

23,026

Saturday	off-peak, 2-car	11	6	2	2,100	10	3,700	OK	36	11,826	198	52	614,974	10,296
Saturday	off-peak, 1-car	2	6	1	1,800	10	1,850	OK	18	1,075	36	52	55,907	1,872
Saturday	owl, 1-car	6	10	1	1,000	6	1,110	OK	11	1,971	66	52	102,496	3,432
		_								44070	200		770 077	45.000

1,850 1,110

										8,422	282		437,936	14,664
Sunday	owl, 1-car	6	10	1	1,000	6	1,110	OK	11	1,971	66	52	102,496	3,432
Sunday	off-peak, 1-car	12	6	1	1,800	10	1,850	OK	18	6,451	216	52	335,440	11,232

										8,422	282		84,218	2,820
noliday, federal	owl, 1-car	6	10	1	1,000	6	1,110	OK	11	1,971	66	10	19,711	660
holiday, federal	off-peak, 1-car	12	6	1	1,800	10	1,850	OK	18	6,451	216	10	64,508	2,160

										14,873	300		74,363	1,500
holiday, state	owl, 1-car	6	10	1	1,000	6	1,110	OK	11	1,971	66	5	9,855	330
holiday, state	off-peak, 1-car	2	6	1	1,800	10	1,850	OK	18	1,075	36	5	5,376	180
holiday, state	off-peak, 2-car	11	6	2	2,100	10	3,700	OK	36	11,826	198	5	59,132	990

### Fixed Guideway Operating Plan - Alternative #4, Fixed Guideway Alternative, Full Corridor Alignment Kamokila - Airport - Dillingham - King with a Waikīkī Branch

	U		-	O	O	
Annualization weekday: Annualization Saturday: Annualization Sunday: Annualization holiday, federal: Annualization holiday, state:					(	
	Route Data Vehicle R/T R/T	Period	Daily Data	Capacity Capacity	Vehicle Train	Annual Data
	capacity time distance	Day Description	# hours Headway Consist (pphpd)	TPH (pphpd) OK?	Vehicles Miles Hours	Days Vehicle Miles Train Hours
Kapolei / University of Hawall	185 100.94 52.00	weekday peak, 2-car	5 6 2 3,145	10 3,700 K SK	34 5,255 85	246 1,292,633 20,910
		weekday off-peak, 2-car weekday off-peak, 1-car	9 12 2 1,800 3 12 1 900	5 1,850 OR 5 925 OK	18 5,007 81 9 835 27	246 1,231,803 19,926 246 205,301 5,642
		weekday owl, 1-car	3 20 1 500	3 555	6 556 18 11,653 211	246 136,867 4,428 2,856,604 51,906
		Saturday off-peak, 2-car. Saturday off-peak, 1-car.	11 12 2 1,800 2 12 1 900	5 1,850 OK 5 925 OK	18 6,120 99 9 556 18	52 318,244 5,148 52 28,931 936
		Saturday GWI, 1-car	6 20 1 500	3 555 OK	6 1,113 36 7,789 153	52 57,862 1,872 405,037 7,956
*						
•		Sunday off-peak, 1-car Sunday owl, 1-car	12 12 1 500 6 20 1 500	5 925 OK 3 555 OK	9 3,338 108 6 1,113 36	52 173,587 5,616 52 57,862 1,872
			•		4,451 144	231,450 7,488
		holiday, federal off-peak, 1-car	12 12 900	5 925 <b>OR</b>	9 3,338 108	10 33,382 1,080
		holiday, federal owl, 1-car	6 20 1 500	3 <b>5</b> 55 <b>OK</b>	6 1,113 36 4,451 144	10 11,127 360 44,510 1,440
		Laurana Promision		- 1 000 1000		70 500
		holiday, state off-peak, 2-car holiday, state off-peak, 1-car holiday, state owl, 1-car	11 12 2 1,800 2 12 1 900 6 20 1 500	5 1,850 OK 5 925 OK 3 555 OK	18 6,120 99 9 556 18 6 1,113 36	5 30,600 495 5 2,782 90 5 5,564 180
		nonoay, state jowi, 1-tai		3   333   455	7,789 153	38,946 765
					36,133 805	3,586,547 69,555
Kapolei / Waikiki	185 97.11 51.38	weekday peak, 2-car	5 6 2 2,784	10 3,700 OK	34 5,397 85	246 1,327,594 20,910
		weekday off-peak, 2-car weekday off-peak, 1-car	9 12 2 1,800 3 12 1 900	5 1,850 OK 5 925 OK	18 5,143 81 9 857 27	246 1,265,119 19,926 246 210,853 6,642
		weekday owl, 1-car	3 20 1 500	3 555 <b>OK</b>	5 476 15 11,873 208	246 117,141 3,690 2,920,708 51,168
		Saturday off-peak, 2-car Saturday off-peak, 1-car	11 12 2 1,800 2 12 1 900	5 1,850 <b>OK</b> 5 925 <b>OK</b>	18 6,286 99 9 571 18	52 326,851 5,148 52 29,714 936
		Saturday owl, 1-car	6	3 555 <b>CM</b>	5 952 30 7,809 147	52 49,523 1,560 406,088 7,644
					,	
		Sunday off-peak, 1-car. Sunday owl, 1-car.	12 12 1 900 6 20 1 500	5 925 OK 3 555 OK	9 3,429 108 5 952 30	52 178,282 5,616 52 49,523 1,560
	•				4,381 138	227,805 7,176
		holiday, federal off-peak, 1-car holiday, federal owl, 1-car	12 12 1 900 6 20 1 500	5 925 OK 3 555 OK	9 3,429 108 5 952 30	10 34,285 1,080 10 9,524 300
		incidely, receive jown, 1-ca	20 1 300	3   333   MARAGE	4,381 138	43,809 1,380
		holiday, state off-peak, 2-car	1112 2 1,800	5 1,850 <b>GK</b>	18 6,286 99	5 31,428 495
		holiday, state off-peak, 1-car holiday, state owl, 1-car	2 12 1 900 6 20 1 500	5 925 OK 3 555 OK	9 571 18 5 952 30	5 2,857 90 5 4,762 150
				, seventinimas	7,809 147	39,047 735
					36,253 778	3,637,456 68,103
					72,386 1,583	7,224,004 137,658
	•					

#### Fixed Guideway Operating Plan - Alternative #4, Fixed Guideway Alternative, Full Corridor Alignment Kalaeloa – Airport – Dillingham – Halekauwila

Annualization weekday: Annualization Saturday: Annualization Sunday: Annualization holiday, fed Annualization holiday, sta 246 52 52

	24 1 2 1	D /T
	Re	oute Da
ate:	3	
	5	
deral:	10	
	32	

R/T R/T capacity time 185 110.06 55.22

weekday

weekday

weekday

off-peak, 2-car

off-peak, 1-car

Capacity Capacity Day TPH Vehicles # hours Headway Consist Description (pphpd) Hours weekday 74 38 20 10 7,400 3,700 11,138 185

2,100

1,800

1 1,000

10

6

Days Vehicle Miles Train Hours 246 2,740,028 45,510 246 2,532,674 42,066 246 246 14,022 8,856 422,112

266,597

5,961,412

110,454

Saturday	owl, 1-car	Ö	10	1	1,000	0	1,110	OK	12	2,10/	/2	52	112,708	3,/11
C . I	and disease	-	10	4	1.000	6	1,110	ΔV	12	2,167	70	בר	112,708	3,744
Saturday	off-peak, 1-car	2	6	1	1,800	10	1,850	OK	19	1,144	38	52	59,485	1,976
Saturday	off-peak, 2-car	11	6	2	2,100	10	3,700	OK	38	12,583	209	52	654,331	10,868

1,850

1,110

10,295

1,716

1,084

24,233

19 12

171

57 36

449

										9,031	300		469,616	15,600
Sunday	owl, 1-car	6	10	1	1,000	6	1,110	OK	12	2,167	72	52	112,708	3,744
Sunday	off-peak, 1-car	12	6	1	1,800	10	1,850	OK	19	6,864	228	52	356,908	11,856

										9,031	300		90,311	3,000
holiday, federal	owl, 1-car	6	10	1	1,000	6	1,110	OK	12	2,167	72	10	21,675	720
holiday, federal	off-peak, 1-car	12	6	1	1,800	10	1,850	OK	19	6,864	228	10	68,636	2,280

										15,895	319	· ·	79,473	1,595
holiday, state	owl, 1-car	6	10	1	1,000	6	1,110	OK	12	2,167	72	5	10,837	360
holiday, state	off-peak, 1-car	2	6	1	1,800	10	1,850	OK	19	1,144	38	5	5,720	190
holiday, state	off-peak, 2-car	11	6	2	2,100	10	3,700	OK	38	12,583	209	5	62,916	1,045

# Fixed Guideway Operating Plan - Alternative #4, Fixed Guideway Alternative, 20-mile Alignment East Kapolei to Ala Moana Center

Annualization weekday: Annualization Saturday: Annualization Sunday: Annualization holiday, federal: Annualization holiday, state:

East Kapolei / Ala Moana Ctr

246
52
52
10
5

Route Data					Dai	ly Data								Annual Data	
e R/T R/T ty time distance	Day	Period Description	# hours	Headway	Consist	Demand (pphpd)	TPH	Capacity (pphpd)	Capacity OK?	Vehicles	Vehicle Miles	Train Hours	Days	Vehicle Miles	Train Hours
80.57 41.62															
	weekday	peak, 2-car	5	3	2	5,610	20	7,400	OK	54	8,202	135	246	2,017,6271	33,210
	weekday	off-peak, 2-car	9	6	2	2,100	10	3,700	OK	28	7,655	126	246	1,883,118	30,996
	weekday	off-peak, 1-car	3	6	1	1,800	10	1,850	OK	14	1,276	42	246	313,353	10,33
	weekday	owl, 1-car	3	10	1	1,000	6	1,110	OK	9	820	27	246	201,763	6,642
										_	17,953	330	_	4,416,361	81,180
	Saturday	off-peak, 2-car	11	6	2	2,100	10	3,700	OK	28	9,356	154	52	485,515	8,008
	Saturday	off-peak, 1-car	2	6	1	1,800	10	1,850	OK	14	851	28	52	44,229	1,456
	Saturday	owl, 1-car	6	10	1	1,000	6	1,110	OK	9	1,640	54	52	85,298	2,808
										_	11,847	236	_	616,041	12,272
	Sunday	off-peak, 1-car	12	6	1	1,800	10	1,850	OK	14	5,103	168	52	265,372	8,73
	Sunday	owl, 1-car	6	10	1	1,000	6	1,110	OK	9	1,640	54	52	85,298	2,808
										-	6,743	222	-	350,670	11,544
	holiday, federal	off-peak, 1-car	12	6	1	1,800	10	1,850	ОК	14	5,103	168	10	51,033	1,680
	holiday, federal	owl, 1-car	6	10	1	1,000	6	1,110	OK	9	1,640	54	10	16,403	540
	,,					-,					6,743	222	_	67,436	2,220
	holiday, state	off-peak, 2-car	11	6	2	2,100	10	3,700	OK	28	9,356	154	5	46,780	77
	holiday, state	off-peak, 1-car	2	6	1	1,800	10	1,850	ОК	14	851	28	5	4,253	140
	holiday, state	owl, 1-car	6	10	1	1,000	6	1,110	ОК	9	1,640	54	5	8,202	27
												236			1,180

55,134

1,246

5,509,743

108,396